UNIVERSITY OF SOUTHAMPTON

FACULTY OF SOCIAL SCIENCES

GERONTOLOGY

Volume: 1 of 1

'Older women's access to and use of health-care services in Mexico'

by

Mayra Pamela Calderon Ambrossen

Thesis for the degree of Doctor in Philosophy

Supervisors:

Dr Gloria Langat and Dr Rosalind Willis

April 2022

Word count: 73, 739.

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL SCIENCES

Gerontology

Doctor of Philosophy

'OLDER WOMEN'S ACCESS TO AND USE OF HEALTH-CARE SERVICES IN MEXICO'

By Mayra Pamela Calderon Ambrossen

In Mexico's fragmented health-care system, the type of health insurance obtained depends predominantly on a person's employer. Older women, a disadvantaged workforce compared to men, can face disadvantages in accessing health-care. The government, aiming for universalisation of health-care services, introduced 'Seguro Popular' (SPS), an insurer and provider of health-care, in 2002-2003. The effect of SPS on older women's health-care is not fully understood. This mixed-methods research aimed to understand the dynamics of older Mexican women's access to and use of health-care services, to examine inequalities between subgroups of women (e.g. single, rural) and to study whether the variety of insurers provide sufficient access to health-care for older women.

The first part of the study (secondary quantitative analysis) used the Mexican Health and Ageing Study (MHAS) as a dataset and the Andersen's behavioural model as a conceptual framework. It found that older women's entitlement to health-care insurance was largely derived from being a worker/pensioner's dependent (through spouse or child(ren)). A 32% of women were affiliated to SPS and about 7% of the participants were unaffiliated to a health-care provider despite being eligible for SPS, while 15% had multiple affiliations. Moreover, women who were single (had never married) had significantly higher odds of being uninsured compared to married participants.

The second part of the study (primary qualitative data collection) used thematic analysis to analyse 20 in-depth interviews with older women in Mexico. The results showed that spouses and children enabled the access and use of health-care services, while multiple affiliations were a way of maximising benefits. Participants preferred to receive financial and emotional support from their spouse rather than their child(ren). Some were reluctant to burden their children with expectations of support, while others viewed support from children as natural and reciprocal throughout the life course.

Both sets of data lead to a conclusion that there are strong patterns of dependency on spouse and children in terms of access to health-care in later life. In order to provide accessible health-care services, better communication between insurers/providers and stronger presence in rural areas is recommended.

Table of contents

Index of tables

Index of figures

Declaration of Authorship

I, MAYRA PAMELA CALDERON AMBROSSEN declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research. "Older women's access to and use of health-care services in Mexico"

I confirm that:

1 This work was done wholly or mainly while in candidature for a research degree at this University;

2 Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;

3 Where I have consulted the published work of others, this is always clearly attributed;

4 Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;

5 I have acknowledged all main sources of help;

6 Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;

Signed:

_____

Mayra Pamela Calderon Ambrossen

Date: 05/05/2022

Acknowledgements

Thanks to my family and friends, for being there when I needed you all: to my mom for all her help and willingness to do even more and to my dad for believing in me, to my sisters and brothers and of course to Christopher for his support during these six years long journey. To my children: Sebastian and Aurora for joining me on the PhD journey making it even more challenging, for motivating me and help me realise that I can always do more and better.

I want to express my gratitude to my supervisors; Dr Rosalind Willis and Dr Gloria Langat for their excellent support and advice throughout the years of this long research experience.

A special thanks to CONACYT Mexico, my sponsor, for the financial support through this research and to the MHAS team for providing an excellent and timely dataset for this project. Also, with the oversight of my supervisors, editorial advice has been sought. No changes of intellectual content were made as a result of this advice.

And last but not least, a special thanks to the twenty women who provided valuable information to make this possible.

List of abbreviations and acronyms, English-Spanish

ADL: Activities of Daily Living – Actividades de la Vida Diaria

CMR: Regional Medical Health-care Centres – Consultorios Médicos Regionales

CONEVAL: National Council for the Evaluation of Social Development Policy – Consejo Nacional de Evaluación de la Política de Desarrollo Social

ENSANUT: National Survey of Health and Nutrition (Mexico) – Encuesta Nacional de Salud y Nutrición

GP: General Practitioner – Médico General

IMSS: Mexican Social Security Institute – Instituto Mexicano del Seguro Social

INEGI: National Institute of Statistics and Geography – Instituto Nacional de Estadística y Geografía

INSABI: Institution for Health and Wellbeing-Instituto de Salud para el Bienestar

ISSSTE: State Employees' Social Security and Social Services Institute – Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado

LMIC: Low/middle income country – País de bajo y medio ingreso

MHAS: Mexican Health and Ageing Study – Encuesta Nacional de Salud y Envejecimiento

OECD: Organisation for Economic Co-operation and Development – Organización para la Cooperación y el Desarrollo Económicos

PEMEX: Mexican Oil/Petroleum (Mexican state-owned petroleum company) – Petróleos Mexicanos

SDOH: Social Determinants of Health Perspective – Perspectiva de los Determinantes Sociales de la Salud

SEDENA: Ministry of National Defence – Secretaría de la Defensa Nacional

SEM: Seminal socio-ecological model

SEMAR: Ministry of Navy Armed-Marine – Secretaría de Marina (Marine)

SPS: Public Health Insurance Programme – Seguro Popular en Salud (also known in the literature as SPSS: System of Social Protection in Health – Sistema de Protección Social en Salud)

SPSS: Statistical Package for the Social Sciences – Paquete Estadístico para las Ciencias Sociales

UK: United Kingdom – Reino Unido

USA: United States of America – Estados Unidos de América

Chapter 1: Introduction

1.1 Overview of the research

Mexico is a low/middle income country (LMIC) (World Bank Organisation, 2020); it is the world's 11th most populous country and is ageing very fast (Angel *et al., 2*017). People aged 60 and above represent 12% of the general population; a slightly higher percentage of them are women (51.2%) (INEGI, 2020). In this thesis, older women in Mexico are defined as those aged 60 and above.

In Mexico, health-care is normally part of social security benefits. These are paid for and provided mainly by insurers (referred to in this thesis as health-care providers); they are managed by the government and access is gained through formal employment (paying taxes and social security fees) or being a dependent of an employee or social program. However, not everyone has coverage, as there is a lack of universal health-care insurance. Policies for access to health-care providers and social security have been pro-family, encouraging support from the spouse and/or children. However, women do not participate in the formal sector as much as men (Gomes, 2007), which represents a disadvantage for them.

There have been important reforms and changes to Mexican health policy and legislation, such as the introduction of a social assistance programme; the Social Health Protection System (SPS) (Seguro Popular, no date) in 2002-2003, which aimed to universalise health-care services (Maurer, 2008; IMSS *et al*., 2016) and address the lack of health-care insurance (Parker *et al.,* 2015). Unfortunately, SPS has not insured all of the uninsured population (INEGI, 2020; Pagán *et al.,* 2007), and despite the fact that older women ought to be covered by SPS, access is still granted mainly through avenues that indicate dependency (see sub-section 4.2.4) (INEGI, 2012). Mexico reports very high levels of out-of-pocket medical expenses (Maurer, 2008; OECD, 2017), meaning that people are not getting free health-care services and medication from the health-care providers as planned. There have also been associations between sociodemographic factors and benefits for older adults in terms of insurance coverage (e.g. living in an urban area) (Díaz-Venegas *et al.,* 2017).

Mexico is a familialistic country in which marital status, living arrangements and number of children currently alive are good indicators of support for older women. This research explores older women's dependence on child(ren) and spouses, not only to access the health-care system but to use health-care services (e.g. support with transportation to a health-care centre and/or buying medication). It also explores the barriers that older Mexican women may experience as a result of the gendered structure of access to health-care and socioeconomic inequalities, and whether the implementation of SPS has impacted on older women's access to and utilisation of health-care services.

A large percentage of older Mexican adults (88.1%) live with family members, where it may be easier to obtain and provide support. Of those living alone, the majority (59.5%) are women (Puig *et al*., 2006). Mexico is experiencing ongoing changes in its health-care system, making it an interesting population to study (Rivera-Hernandez and Galarraga*,* *2*015). Across Latin America, older adults rely on family members in many ways (Varley and Blasco, 2003): for transportation, financially or for assistance with daily life activities. Policies even promote reliance on family members; for instance, in Mexico, the health policy is pro-family coverage. Adults are eligible for health coverage through their working child(ren) (Salgado-de Snyder and Wong, 2007). This raises the question: do older people with many children or a spouse have an advantageous position in terms of access to health-care?

Older adults in Mexico have received limited attention when it comes to research and policy design (Salgado-de Snyder and Wong, 2007). There have only been a small number of studies focusing on gender, ageing and the persistent inequalities in accessing a better quality of life for older women (ibid). According to the literature, older women who are divorced or single are more vulnerable than men socially and economically, because they do not have a spouse on whom to rely (ibid); childless women can also experience this vulnerability. This study focuses on women only, in order to gain an in-depth understanding of their health experiences in terms of their available options for gaining access to and using health-care services in Mexico.

1.2 Dependency and support

Dependency is a concept that can be investigated in many ways; economic, socially, emotionally, institutionally, physically and using different approaches such as medicine, economics, mathematics or psychology. The term dependency embodies a multitude of concepts. Peace (1990:20) considers that dependency is 'a state in which actions by others are a necessary condition for an actor to achieve his or her own goals'. A person can be defined as dependent if 'relies on another' (Oxford, 2017:265). The concept of dependency commonly used in social sciences and gerontology usually overlaps with disability, because it refers to the reliance of the older adult on society, family members and/or health and social services in order to obtain support for care due to disabilities or limitations with activities of daily living (ADLs) (Peace, 1990). Dependency, in this thesis, has been examined in terms of having access (affiliation) to and using health-care services. It refers to the avenue through which older women access (affiliation) and use health-care services, including derived rights; in other words, in what way do older women depend/rely on their spouse or child(ren) in order to access and use health-care services? This was investigated from a gerontological, social, political and economic perspective, in order to gain an in-depth understanding of the dynamics of dependency and support for health-care access and utilisation among older Mexican women (for further discussion on dependency, see section 2.4 under theories).

Gomes (2007) considers a dependent to be someone who may be in a disadvantageous financial situation, such as older Mexican women; as late as 2001, most of these women were eligible for social security only through their spouse or children or social programmes due to their lack of participation in the workforce (Gomes, 2007). A derived right is another term used in this thesis as a way to access certain health-care providers such as the Mexican Social Security Institute (IMSS), the State Employees' Social Security and Social Services Institute (ISSSTE), the Mexican state-owned petroleum company (PEMEX) and the Defence and Marine (Navy).

Support can be hard to define (Allen and Wiles, 2013); it is a broad concept. Throughout this thesis, the term support is used to refer to any kind of help that facilitates access to and/or use of health-care services (e.g. financial support or help with transport). When social security programmes began in Mexico in 1943 (Wong and DeGraff, 2007), the

legislation considered women to be the beneficiaries of working men (or vice-versa) if demonstrating a tie with them (married, widowed or living together). Currently, an adult aged 60 or older can access health-care services through his/her child with social security, but they have to demonstrate their financial dependency (Salgado-de Snyder and Wong, 2007) or co-residence with the child (depending on the provider). In some cases (ISSSTE) the benefit can be extended to grandparents (ISSSTE, 2015). However, older adults can also affiliate to SPS in their own right. They can also access other providers if they are workers or pensioners in the formal sector, or if they pay for the service as if it was private (see section 4.2). It is common for Mexican parents to rely on their child(ren) as their main source of support due to the limited support from the government (Noel-Miller and Tfaily, 2009; Makita, 2012) and familialistic culture (the family taking priority over individual interests (Silva and Campos, 2007)). Responsibility to ageing parents is an aspect of the broad concept of familialism (Silverstein *et al*., 2006). It refers to the 'normative expectation that adult children have the duty to support their ageing parents' (Silverstein *et al*., 2006:1069 citing Cicirelli, 1988, 1990). Moreover, patterns of informal support provision vary over time (temporality), just as need for support varies over time in participants life courses.

In Latin-American countries such as Mexico, previous generations of women were frailer and poorer than men, and thus more dependent on assistance from adult children (data from MHAS) (Gomes, 2007; Noel-Miller and Tfaily, 2009). The fact that women were more dependent on others than men may be a consequence of their accumulated disadvantages over their life course. The literature indicates that a higher proportion of older women (72%) than older men (58%) receive financial support from children (Salgado-de Snyder and Wong, 2007). In 2012, half of older women were reliant on their spouse and/or child(ren) in terms of receiving health-care (INEGI, 2012). This raises concerns about subgroups of women who could be at more of a disadvantage in terms of accessing and using health-care services, such as those who are single, divorced and/or childless; it has been found in the literature that marital status, as well as health conditions, are important factors in children's support of their parents in old age (Lawton *et al.,* 1994; Silverstein *et al.,* 1995). Research on childlessness is important, since the number of childless women is

likely to increase in developing countries (Wenger *et al.,* 2000). Hence, this study investigates childless women.

1.3 Access to health-care in Mexico

Having access to and using health-care services can make a difference to older people's quality of life. Research into the factors influencing access to and use of health-care services by the ageing population is very important when developing policies in order to meet older people's needs. Many countries have achieved higher life expectancy (Crimmins *et al.,* 1994; World Life Expectancy, 2019) by tackling common and serious diseases, increasing quality of life, improving health-care services, finding the cure for diseases and increasing the utilisation of available services, among many other elements. Hence, an analysis of the determinants of access to and utilisation of health-care services in older adults will contribute to the achievement of these goals. It is important to research the way older adults access health-care in developing countries such as Latin-America (Cetrángolo *et al.,* 2007).

Access to IMSS, ISSSTE, PEMEX, and Defence (SEDENA) and Marine (Navy/SEMAR) is determined 'by a compulsory system of rights acquired under formal relations of work' (Makita, 2012:40), for instance an employer's and employees' taxes plus legally mandated government contributions (Dantés *et al., 2*011). This gives access to health-care services, pensions, mortgages and retirement savings, among other benefits, also referred as affiliation to a health-care provider/insurer. Those working in the informal sector who do not contribute with payments to social security have no affiliation to the health-care provider or insurance schemes listed above and as a consequence no access to health-care services with them. Others who may not have access to these schemes include workers whose employers do not report the labour relationship with the employee to IMSS. Although this is illegal in Mexico, it can be convenient for employers (Mercedes *et al.,* 2013). Women are underrepresented in the formal labour sector because they tend to take up informal roles such as house cleaners and street vendors; this affects their ability to access health-care services and pensions by themselves (INEGI, 2015; Salgado-de Snyder and Wong, 2007). Recent data shows that women make up 56.8% of informal workers in Mexico; they earn on average 35.2% less than men working informally (DataMexico, 2020). Nonetheless, access to health-care in Mexico for informal workers can be obtained

through affiliation at the Mexican Public Health Insurance Programme, also known as 'Seguro Popular' (SPS). It is run by the Ministry of Health, working with resources from federal and state governments (Dantés *et al*., 2011). This social health protection system was introduced in 2001-2002, meaning that it is no longer necessary to be a formal sector worker in order to gain access to basic health-care services. However, not everyone who is eligible to use SPS actually does so.

Apart from the government initiatives providing access to health-care there is the private sector which anyone can access by making direct payments. Thus, the fact that someone is not affiliated to a health-care provider/insurer in Mexico does not necessarily mean the person cannot access health-care services if they are financially capable, but that there are different conditions for that (out of pocket payments).

1.4 Aims

It is relevant to investigate how the introduction of SPS has affected subgroups of older women and whether it has succeeded in improving equitable access to health services. A number of studies (CONEVAL, 2014; ENSANUT, 2012) have evaluated the efficacy of SPS (see section 4.2). However, this research aims to provide evidence based on gender, as researchers recommend creating policies according to gender conditions in developing countries because of men and women's different life trajectories (Salgado-de Snyder and Wong, 2007).

One of the main objectives in this research was to examine the family as an enabling factor in older women's access to and use of health-care services. Another aim was to develop an understanding of the situation of older women whose affiliation to health-care services is dependent on others (spouse and/or children), and that of those who have no children or spouse to rely on for affiliation to health-care services. This helped ascertain whether there are any disadvantages (in the way they deal with their health expenses and support needs, and the alternatives they have found for accessing health-care). More generally, the aim was to observe different groups of women (e.g. rural or single/childless) in order to detect inequalities.

1.5 Research questions

The research questions cover three thematic areas: dependency on children and spouses for access (affiliation) and utilisation of health-care services, barriers to accessing and using health-care services, and the implications of the health reform and changes in legislation for older women's health. This thesis aims to explore the extent to which older women in Mexico are in a state of dependency in terms of access and use of health-care services, and ascertain how support from a spouse and/or children impacts on their access to and use of such services. To do so, the following questions will be addressed:

1. How does having a spouse and/or child(ren) impact on older women's access to and use of health-care services in Mexico?

2. What are the barriers older Mexican women face in gaining access to and using health-care services? And how can they overcome them?

3. What has been the experience of older women in Mexico of gaining access to and using health-care services since the introduction of SPS?

This mixed-methods research will answer research questions 1 and 2 using a quantitative secondary data analysis of MHAS and a qualitative thematic analysis of semi-structured interviews carried out in Mexico, and research question 3 using only qualitative data.

Detailed information about these questions and the methodology for addressing them is provided in section 5.5.

1.6 Hypothesis and assumption

The hypothesis in this thesis was that single and childless older Mexican women are disadvantaged in terms of accessing health-care services. Under the pro-family regulations, having more children and/or a spouse may increase the likelihood of being affiliated to a health-care provider in later life and receiving support to access and use health-care services. Thus, older people who have more children may have an advantage compared with their childless counterparts. This is supported by some literature discussed in sub-sections 4.2.2 and 6.4.1. An assumption in this research was that there was a lack of knowledge regarding SPS (eligibility, renewing affiliation and health coverage), since it is a changing and relatively new system. This is discussed in further chapters.

1.7 Outline of the thesis

The overall structure of the research takes the form of nine chapters, including this introductory chapter, which presents the key concepts such as dependency and support and gives a general explanation of how the complicated Mexican health-care system works. It addresses the research questions and outlines the next chapters of the thesis.

Chapter 2 begins by laying out the theoretical dimensions of this gerontological research. Two theories are used in this study: life course perspective, which looks at experiences through the life course of women at micro and macro-levels of analysis; and structured dependency theory (macro-level of analysis), used because such experiences include issues such as policies, employment, education, family and dependence. The chapter also discusses the Andersen behavioural model, which is used to organise the literature review chapter and to structure the logistic regression models.

Further on in this thesis, Chapter 3 comprises a literature review about determinants of access and utilisation of health-care services. The gerontological literature is explored, following the Andersen behavioural model structure and focusing on older women rather than older adults. The chapter uses literature from both developing and developed countries.

Chapter 4 sets out the health-care providers and health initiatives for older adults available in Mexico. It explains in detail how the Mexican health-care system works and focuses on literature covering the policies on access (affiliation) to and use of health-care services in Mexico, the latest changes in health legislation, statistics on older adults' access to and utilisation of health-care services, and the dependency on child(ren) and/or spouse that older Mexican women may experience.

Chapter 5 covers the methodology used for this study. It discusses the research methods utilised for both the quantitative and qualitative parts of the research. Details of the way this mixed-methods research was conducted, including ethical considerations, sampling, data collection, dataset, variables, analysis process, limitations and reflexivity, are included in the chapter. Generally, this mixed-methods research project used secondary quantitative data from the Mexican Health and Ageing Study (MHAS) 2015, and 20 individual semi-structured interviews carried out in Mexico for the qualitative analysis.

Chapter 6 contains the results of the quantitative part of the research. It reports results from the bivariate and multivariate analyses, which were obtained using the Statistical Package for the Social Sciences (SPSS).

Chapter 7 analyses the interviews undertaken and reports the results from the qualitative part of the research, which used thematic analysis. It includes the thematic maps used and is organised according to the themes found in the analysis.

The final chapter (8) brings the entire thesis together; it integrates and discusses the results from the two parts of the research (quantitative and qualitative) and the available literature. It is organised in relation to the research questions and includes policy recommendations and limitations of the research. It includes a discussion of the implication of the findings for future research in this area, and finally, a conclusion to this research.

Chapter 2: Theoretical and conceptual frameworks

2.1 Overview of the chapter

This chapter discusses the choice of theories in relation to the research questions and the way these theories informed the different stages of the research. Sections 2.2 to 2.5 discuss the selected theories that are relevant to this thesis: life course perspective; and structured dependency theory. These theories are 'lenses' that were used to conduct a critical literature review examining specific policies and research into women's experiences during their lives that led to gender inequalities, dependence and barriers to access and use of health-care services at older ages. The theories were used throughout the research to help explain the results and linking them to policy in later chapters. This chapter also discusses other theories that were considered, such as feminist and disengagement theories.

Later in the chapter, sections 2.6 onwards present the Andersen's behavioural model, discussing the reasons why it was chosen for this research and the criticisms of the model. Key concepts such as access to and utilisation of health-care services are also discussed; these are used in both the quantitative and qualitative parts of the research.

2.2 Theory use

Theorising in ageing research is the process of searching and developing ideas in order to understand and explain observations and answer questions (Silverstein *et al.,* 2008; Victor, 2005). 'Theory' is used for interpretations, i.e. 'an attempt to explain' (Silverstein *et al.,* 2008:4) and as a lens which can provide meaning; the meaning will be different depending on the lens used. Several lenses may be useful when observing complex processes such as ageing (ibid). For instance, this research looks at policy combined with older women's experiences; thus, two lenses are beneficial for the study. Another reason for using two lenses was that theory is crucial in ageing research (Bengtson, 1997) and social gerontology is complex. Furthermore, lack of theory can limit research findings (Silverstein *et al.,* 2008).

Gerontologists are interested in questions at a micro level (personal experiences of ageing) and macro level (social perspectives such as implications for the health-care system) (Victor, 2005). Researchers in other disciplines have more recently sought to include more levels of analysis by looking at connections/interrelations between levels (Greenfield *et al.,* 2019). The research questions for this study (see sections 1.5 and 5.5) are both micro and macro levels. In this research, there is an emphasis on the gender inequalities faced by women and the vulnerability of older women. First, in order to answer research questions 1 and 2, structured dependency theory facilitates an understanding, on the macro level, of the relations and causes of dependency in accessing and utilising health-care that older Mexican women may experience due to the health-care system and its regulations. Secondly, in order to support the answers given to the research questions, life course perspective was used to answer research question 3 by examining older Mexican women and the economic, labour, social and political factors that lead to inequalities in accessing and using health-care services, as well as making comparisons with other older women with different characteristics (marital status, location, number of children, among others) using their reported experiences. Life course perspective was used at the micro level to explain which sociodemographic factors and earlier life experiences influenced access to and utilisation of health-care services (in terms of the three research questions). The way these theories were chosen is explained in the next section.

2.3 Selection of theories

Selecting a theory or a set of theories is a crucial point in research design. It is important to consider the characteristics of the study among other factors. In order to analyse and interpret the data for this research, two theories were chosen based on their appropriateness, explanatory power and the topic in question. Before selecting the most suitable theories for this research, the following options were considered:

Disengagement theory, created in the 1950s by Cumming and Henry (Mein *et al.,* 1998), was one of the first and major theories in gerontology to make links between the micro and macro approaches (Victor, 2005). Like other theories, it gives attention to the inequalities and disadvantages people face. It has been used to guide health policies (Hossen and Westhues, 2011). This theory considers benefits for the younger population in terms of employment and power, among other aspects (ibid), and it makes connections

with health and societal impacts on older adults' lives (Mein *et al.,* 1998), as well as gender roles and differences between men and women. It was not chosen for this research because the emphasis is not on the transfer of power from older women to their children in this thesis (e.g. social and labour roles); in fact, power itself is not a main component of this research.

The social determinants of health perspective (SDOH) was another option. It recognises the importance of socioeconomic factors as the main influencers of human health status, and refers to conditions of life including work, age and health systems (Mein *et al.,* 1998). However, instead of SDOH theory, life course perspective was chosen. Both provide conceptual elements for analysing the institutionalised and cohort processes that influence ageing. However, life course perspective focuses more on particular individuals' experiences, while SDOH focuses more on political views. Life course perspective 'refers to a sequence of socially defined events and roles that the individual enacts over time' (Giele and Elder 1998:21).

Social exchange theory was also considered for this research, because dependency itself is related to social exchange, reciprocity and obligation (Uehara, 1990). It is a relatively modern theory; together with life course perspective (Giele and Elder 1998) and feminist theories of ageing, it was listed among the third generation of theories by Bengtson (1997). It has been used in previous research to explain the structure and patterns of intergenerational financial exchanges (Bengtson *et al.,* 1997). In the qualitative part of the research, it is mentioned, since some of the support received from a spouse or children can be a result of reciprocity. A disadvantage of this theory is that there is no link with the macro level of analysis and it does not address issues of gender or class in detail (Victor, 2005).

When choosing a theory that emphasises the disadvantages older women face in gaining having access to health-care services in Mexico, cumulative inequality theory was considered. This theory studies micro and macro levels, takes into account social systems and helps to explain how they generate inequalities based on the social advantages and disadvantages that older adults face; it can be combined with life course perspective (Silverstein *et al.,* 2008). Moreover, since this research aims to propose policy recommendations in order to promote a social justice based on women's health

requirements, feminist perspective was considered as it would help understand older women's perspectives (Silverstein *et al.,* 2008) in the qualitative analysis. Feminist perspective also focuses on the intersection of inequalities to understand women's experiences, and 'feminist gerontology is uniquely able to offer scholars a lens through which to view these intersections' (ibid: 16). Feminist research is characterised as the common pursuit of knowledge centring the lives of women as an oppressed group (Hesse-Bieber, 1998: 169). It studies women's everyday experiences and the meaning of phenomena from these experiences (Garko, 1999). Some of the objectives of feminist perspective are to explore knowledge about inequalities that are often ignored by traditional approaches and to foster social justice (Hesse-Bieber, 1998: 169). Some research has recognised that feminist principles such as empowerment and inclusion can help to improve older women's experience when it comes to health-care systems (McCandless and Conner, 1999). However, since structured dependency theory, which was influenced by feminist theory, had already been chosen, it was not necessary to include feminist theory separately in this study. Another reason why it was not included was that life course perspective would adequately answer the research questions on a micro level. In the next few sections, each of the chosen theories is defined, as well as an explanation of the way it contributed to this research.

2.4 Structured dependency theory

Structured dependency theory (influenced by other theories such as feminist perspective) is suitable to use at a macro level because it views dependency as a socially constructed entity (in this case familialistic Mexican culture and policies that promote dependency on children and spouse in order to access health-care services). It emphasises the inequalities that older women experienced earlier in their lives (in this case employment and education), because in order to understand the dependency of groups (in this case older Mexican women) it is important to study their nature (Victor, 2005) (e.g. policy, tradition).

Structured dependency is a well-established theory, proposed by Townsend (1981). In the United States of America (USA), similar views built on structured dependency theory were described as political economy (Cattan, 2009); these views were influenced by the feminist theory (Victor, 2005), disengagement theory and other social gerontology approaches (Townsend, 1981). According to Townsend (1981), society has created a framework of

institutions and norms within which older adults' problems emerge. For instance, Townsend (1981) emphasised taxation, transport and decisions taken regarding employment that affected older adults' lives. In this research, these institutions are constituted by health-care providers in Mexico, some of which provide with affiliation to a health-care provider as part of the social security programme. The theory focuses on the importance of financial resources in influencing the experiences of older adults, low pensions, and retirement, among other institutional practices which have created dependency in older adults, and also on those living in poverty (Mein *et al.,* 1998). These elements make the theory suitable to use in developing countries such as Mexico, even though the theory was created in relation to the United Kingdom (UK) context, which has different policies and institutional practices to Mexico. Retirement is seen as a mechanism of social control and as a strategy for labour production (Wilson, 1997). Structured dependency theory promotes the idea that societal structures make older adults dependent (Cattan, 2009). In other words, 'many of the disadvantages of old age are socially created' (Wilson, 1997:343). The theory has been criticised for being generalistic and for seeing older adults as dependents when they may not consider themselves that way; many older adults, when they get sick and need help, can pay for their own assistance, deliveries, transportation to the hospital, residential care, support at home and other services (ibid). However, it depends on the country context; in some countries it is rare that older people have the means to pay for those services if needed, and so they may depend on family members to cover such necessities. In Mexico, society is strongly familialistic, and the impacts of this are related to research questions 1 and 2: How does having a spouse and/or child(ren) impact on older women's access to and use of health-care services in Mexico? What are the barriers older Mexican women face in gaining access to and using health-care services? And how can they overcome them?

Research question 2 can be answered at a macro level; while some barriers to accessing and using health-care services are due to personal reasons (family situations, self-confidence), many others are due to the health system (policies, location). Structured dependency theory has mainly been used for macro level research questions and lately at both a micro and macro level (Victor, 2005). The theory has also been used for analysing qualitative research about the meaning of independence for older adults with different

residential conditions, including aspects such as health or financial restrictions (Hillcoat-Nallétamby, 2014). A suitable example of using structured dependency theory in health-care research and combining it with other theories is provided by Mein and colleagues (1998), using qualitative data from the British Whitehall II study. They applied four theories in order to examine issues of health at retirement age, and presented their findings in relation to each theory, making clear the role of the theory in their research (Mein *et al.,* 1998). Using structured dependency theory, the authors were able to discuss lowered income in retirement and its effects.

Structured dependency theory is suitable for this research because it emphasises the inequalities experienced earlier in older adults' lives (Victor, 2005). It contributes to understanding the dependency situations of groups (in this case older Mexican women). It is appropriate because it is important to study the nature of status and to view dependency as a socially constructed entity (ibid). It explains that dependency is enhanced and reinforced by the expulsion of older adults (in this research older women) from employment (in this research formal employment) in capitalist societies (such as Mexico) (ibid). It has been found that in terms of financial matters such as pensions and savings, level of dependency is related to occupational status during working age (Mein *et al.,* 1998), and since older Mexican women have been at a disadvantage in terms of formal work opportunities, this theory may help to understand their dependency. Moreover, the theory was chosen because Mexico faces many gender, economic and labour inequalities, and it is useful to study the way these inequalities affect older women when it comes to health-care.

In section 1.2, the concepts of dependency and support were introduced in order to analyse whether dependence on others to attain health-care is a factor that indicates inequalities in access. Dependency on others 'in large part is a consequence of social conditions' (Silverstein *et al.,* 2008:213). It involves the need for support from others, and it can have a positive or negative connotation. In terms of this research, it can have both; for women with no support, it could be negative, while for those with many support options, it could be a good thing, given that sometimes a dependent behaviour helps to obtain desired outcomes (Silverstein *et al.,* 2008) (e.g. access to medication and consultation).

On the macro level, the Mexican policies of basing access to health-care on derived rights can cause dependency on others and inequalities. However, since the introduction of SPS, such effects may have been diminished; this research aims to ascertain the extent to which these inequalities have reduced (macro-level research question 3). Also, if this is the case, other concepts such as self-sufficiency (micro level) could arise due to women not needing derived rights in order to access health-care.

2.5 Life course perspective

Life course perspective in research was instituted about 100 years ago in North America; it was developed by social economists (Bengtson *et al.,* 1997). In Europe, the approach started with bibliographical collections of life stories and narrative methods (Heinz and Krüger, 2001). The approach is popular in social sciences, psychology and history (ibid) and is suitable to use in gerontological research because it involves a sequence of transitions linked to age, embedded in history and social institutions (Bengtson *et al.,* 2012). It also has logical connections to studying age, since it is related to the passage of time (Dannefer, 2003). It sensitises researchers to the importance of historical conditions, which enables them to understand individual development and family life (Bengtson *et al.,* 2012). It places importance on events in early life in order to analyse later experiences (Elder, 1994). Transitions are important when studying life course perspective, as are their impacts on later experiences/events (ibid). This is relevant to the life course approach because many life events are fairly standard and regulated by institutions, such as education, entry into the labour market, certain family events, leaving home, parenthood and retirement (Heinz and Krüger, 2001). Institutions may give structure to the life course through norms and time regulations (ibid). However, patterns in timing vary; some are regulated by the biological clock, while others depend on specific regulations and vary from country to country and between genders (ibid). Cultural standards may also shape life courses; for example, in some cultures, marriage may be considered late after 23 years old for women, while in others this may not be the case until 40 years old. The organisational practices associated with life events or transitions can be seen as a timetable of life stages (ibid). Some authors have wondered whether the disappearance of age-based norms will challenge ageing theories such as life course perspective (Silverstein *et al.,* 2008). Hence, change in social context over time must be considered. In Mexico, certain technological

(e.g. introduction of the internet), social (e.g. more women participating in the labour market), economic (e.g. crises) and political changes (e.g. the introduction of SPS) have created a different context for women over 60 from that of their daughters.

Life course perspective establishes the conditions of inquiry and creates a framework that guides the researcher in identifying issues, selecting variables and creating strategies for the design and analysis of the study (Bengtson *et al.,* 2012). Its usability has increased, and it is widely applied (Silverstein *et al.,* 2008). In health-care research, it is used because both biological ageing itself and many other aspects such as reproduction, risk of diseases and even childhood matters that can impact on later life are part of the life course. This perspective can be used to measure challenges when an individual's health declines; it is useful for studying life events and shifts in trajectories for individuals or groups, as is done in health literacy (Hanson *et al.,* 2016). The life course model of ageing can be used to design biomarkers and new interventions in order to promote healthy ageing (ibid). Health and ageing research has used life course perspective to study the pathways through which good or poor health can influence early retirement (De-Wind *et al.,* 2013). It has also been used for the quantitative study of self-rated health in older women in England and its association with economic activity trajectories, using secondary data analysis and taking into account that in terms of economic trajectories during the life course, it may be more complicated for women to balance work and family than it is for men (Stone *et al.,* 2015).

This theory focuses on life course study at the individual level of analysis (Victor, 2005). It has been used successfully in designing semi-structured interview guides (De-Wind *et al.,* 2013). Life course perspective considers historical time and how it interacts with women's trajectories (Stone *et al.,* 2015). This is very valuable when it comes to inequalities and health and ageing studies. Moreover, as Elder stated, 'the later years of aging cannot be understood in-depth without knowledge of the prior life course' (Elder, 1994:5).

Bengtson and colleagues set out five principles of the life course; the first is 'linked lives', which recognises and emphasises relationships with people and bonds of kinship over time (Bengtson *et al.,* 2012). The second principle refers to time and place; events such as wars or crises may influence experiences and family interactions, thus, choices and behaviours may change an individual's life direction (ibid). The third principle emphasises transitions and timing in relation to the social context in which individuals make choices (ibid). The

fourth principle recognises individuals as an agent of change in their lives; they construct a future in which planning and effort are important. Finally, the fifth principle is centred on the idea that ageing is a life-long process and that events, relationships and behaviours from earlier stages in life have an impact on wellbeing in later life (ibid). These five principles were used to design the qualitative part of the research, in order to answer the second and third research questions and explore older women's experiences of accessing health-care services and the barriers they faced. Thus, events in women's lives were analysed in order to identify whether decisions and changes in their early lives had led them to rely on their spouse and/or children for accessing and using health-care services in later life. More detailed information about the methods for the analysis and the way this approach was used in the research is provided in sub-section 5.7.3.

Life course perspective was chosen for this research because, at a micro level, it considers several spheres of life such as occupation and family dimensions (Victor, 2005) as well as the way these spheres from older adults' early lives can impact on their health-care access and utilisation in old age. It can bridge the micro and macro levels by incorporating the effects of social structure, effects of history and individual meaning into the analysis (Bengtson *et al.,* 1997). Both parts of this study explored older women's life courses and changes in their access to and use of health-care services that related to specific life events such as widowhood, retirement, having children, marriage. Thus, in the quantitative part of the study, the theory helped to select the relevant questions from the MHAS questionnaire in order to determine which variables to include in the analysis (e.g. whether the woman had children, was married, the reasons she stopped working, and the levels of education she achieved). In the qualitative part of the study, it helped to guide the interviews when needed, but was mainly used when performing the analysis, helping to bear in mind that the life course of each participant was important in understanding their decisions, attitudes and perspectives.

2.6 Concepts of access to and utilisation of health-care services

According to Andersen and Newman (1973), 'access refers to the means through which the patient gains entry to the medical care system and continues the treatment process' (Andersen and Newman, 1973:102). There are specific requirements that must be met in order to access health-care services (ibid) (e.g. the six Mexican health-care providers, which each have their own regulations for affiliation (access) (see section 4.2)). There are factors that increase or decrease the accessibility of health-care services, such as the out-of-pocket cost and queuing time (Andersen and Newman, 1973; Young *et al.,* 2001). It has been pointed out that having access (e.g. affiliation or insurance) to health-care services does not guarantee utilisation when in need (Gold, 1998; Puentes-Markides, 1992; Young *et al.,* 2001). An example of this is Barbados, a developing Caribbean country. The evidence suggests that older women face particular barriers in accessing primary health-care (hospitalisation) despite the country's universal health-care system (individual characteristics and other diverse factors could be the cause of this) (Bushelle-Edghill *et al.,* 2015).

It is frequently understood that the 'right to health' is a 'human right'; some countries such as Mexico (Angel *et al., 2*017) state this right for their citizens in their constitution, but the reality can be different, especially for the uninsured (Ghotbi, 2013:1). The Universal Declaration of Human Rights of the United Nations (1948) states that everyone has the right to medical care, along with a list of other services such as security in the event of unemployment and when ageing (Ghotbi, 2013; United Nations, 2016). The access that a system provides to the population depends on its resources and organisation; when these are adequate, the system can provide universal coverage to the population, which is commonly the case in countries with a strong economy. Usually, the economic resources that allow a health system to work come from taxation, donations, indirect payments or contributions through formal employment (Evans, 2002). Most European countries, as well as Canada, are an example of this (Chappell and Penning, 1996). Universal coverage is what most governments consider they residents should have in order to have a good quality of health-care (Obrist *et al.,* 2007). Universal coverage can be understood as service delivery at no cost at the point of use; however, it can be understood differently throughout the world. The implementation of universal access to health-care entails

overcoming barriers such as discrimination and lack of information, which prevent health-care systems from working efficiently (Ravindran, 2012). In addition, studies conducted in Canada show that the introduction of universal health-care has had positive effects in removing the income barrier, making the use of health-care services more equal (Broyles *et al.,* 1983; Chappell and Penning, 1996; McDonald *et al.,* 1973). More evidence for barriers being diminished by universal health-care access is provided in sub-sections 3.3.2 and 3.3.3.

Because all health-care systems differ, no single marker of access is available to researchers. A common strategy is to ask respondents to identify their usual source of health-care, which reflects the ability of the individual to access the health-care system (Litaker *et al.,* 2005). The usual source of health-care services is a substantively important predictor of utilisation (Miller *et al.,* 2014). Other researchers use number of uninsured, health status, and utilisation of health-care services by the population as indicators of access. The MHAS contains important generalisable data that enables researchers to assess access to health-care through affiliation to one different providers. This was assessed in the quantitative part of the research using the Andersen behavioural model as a conceptual framework (see next section). Moreover, in order to understand access to health-care services on a deeper level, it is recommended that qualitative research is conducted (Puentes-Markides, 1992). This type of analysis was also included in this research.

Access to health-care services and utilisation are two concepts related to one another, but there is an important distinction between them. While access does not guarantee utilisation, utilisation is not possible without access. Andersen and Newman argued that the more suitable the access conditions for the patient, the higher their utilisation of the health-care services (Andersen and Newman, 1973). Later, Andersen and Aday claimed that utilisation is proof of access: 'Characteristics of the system and of the population may influence whether entry is gained, but the proof of access per se is not the availability of services and resources but whether they are actually utilized by the people who need them' (Aday and Andersen, 1974:216). These system and population characteristics may be the reason why the utilisation rate in Costa Rica, a developing country, is similar to the USA and Canada; it is higher than in Mexico and other developing countries (Brenes-

Camacho and Rosero-Bixby, 2009). It has been found that institutional characteristics in Costa Rica, such as type of public health insurance and home visits, are associated positively with higher utilisation of health-care services (Brenes-Camacho and Rosero-Bixby, 2009). In Mexico, due to the introduction of SPS (2002) (see sub-section 4.2.4), older adults have made better use of health services such as prevention screening, particularly in rural areas (Salinas, 2015).

Utilisation can be characterised by purpose: primary care (prevention), secondary care (cure) and tertiary care (stabilisation for long-term irreversible illness) (Andersen and Newman, 1973). Utilisation can be viewed as a type of individual behaviour (ibid), involving decisions taken by the individual based on his or her concerns, knowledge, ideas and culture, among other aspects. The utilisation of health-care services may also be examined in terms of the type of service (e.g. dentist, pharmacist), site (e.g. emergency room, hospital), purpose (e.g. primary care, treatments) and time interval (continuity). The impact of several determinants of utilisation may depend on these factors (Aday and Andersen, 1974). The quantitative part of this study considered primary, secondary and tertiary care: consultations and outpatient procedures (see Table 3 in sub-section 5.6.3). The qualitative analysis, on the other hand, included any type of utilisation that participants brought up during the interviews.

Research has theorised that populations with particular disadvantages in accessing health-care, such as the poor and older adults, underutilise health services (Evashwick *et al.,* 1984). Older women are a disadvantaged group, since they are more likely to be poor than men (Salgado-de Snyder and Wong, 2007). Andersen and Aday considered important to include in research measurements of consumer satisfaction such as: 'Who wanted medical care and did not get it, and why' (Aday and Andersen, 1974:218). This question is also very useful when it comes to identifying possible barriers while researching the underutilisation of health-care services. It is useful in detecting gaps or failures in health-care systems; finding answers to this question could ultimately lead to the development of health policies oriented towards equality.

According to Fernandez-Olano and colleagues, older adults' health-care utilisation would ideally depend exclusively on their health status, but in practice, the decision to use health-

care services depends on a complex interaction of determinants (Fernández-Olano *et al.,* 2006), and this is where inequalities can be identified.

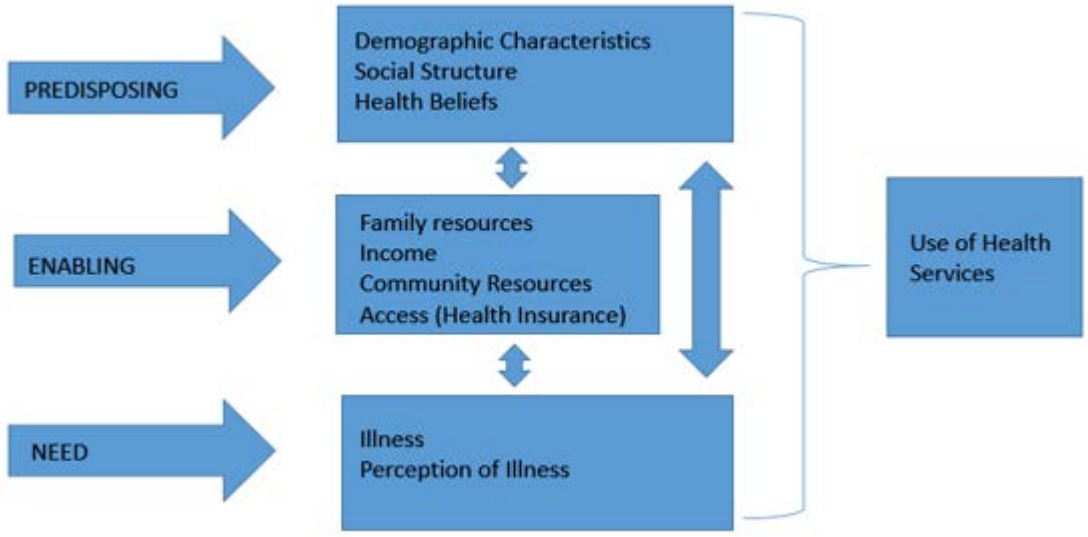
2.7 Andersen's behavioural model of health service use

Andersen and Newman considered it necessary to develop a model in order to analyse individual characteristics and relate them to utilisation patterns; they were interested in the societal effects and personal characteristics that determined the health-care people received (Andersen and Newman, 1973). In the beginning, the model was focused on families and their use of health-care services. Later, Andersen considered it more efficient to focus on the individual rather than the family as the unit of analysis (Andersen, 1995). This study uses the second version of the Andersen's behavioural model, in which the individual (older women) is the subject of analysis; however, the family is key to investigating relationships of dependency and support, and hence such relationships are studied from the individual's perspective in this thesis.

Initially, the model was published in 1968 in the USA; the aim was to measure and promote equity in using health-care services, to understand why families used health-care services, and to inform policymakers, for instance on ways to increase utilisation (Andersen, 1968). Another purpose was to discover the factors that either impeded or facilitated utilisation of health-care services (Andersen, 1995). It was not the first or only model at the time, but it became one of the most widely used frameworks for predicting health-care use worldwide and is still very relevant and useful in health-care research (Miller *et al.,* 2014; Phillips *et al.,* 1998; Wandera *et al.,* 2015).

At a macro level, this model acknowledges external factors such as politics and economic components; it gives an indication of the structure of the dynamics of health service use, taking into consideration accessibility, the right to access health-care services (affiliation), and insurance status. At the individual level, it includes a person's health beliefs, attitudes, values and knowledge, which may influence their perceptions of need and their decisions regarding their use of health-care services (Andersen and Newman, 1973).

Figure 1. Individual determinants of health service use according to Andersen's behavioural model



Source: Andersen and Newman (1973:107).

According to Andersen's behavioural model, the use of health-care services will depend on three factors: predisposing, enabling and need, which can relate to each other (Figure 1).

Predisposing: Certain characteristics such as demographics (age, sex, ethnicity and social class), social structure (education) and health beliefs make it more or less likely that people will use health services (Andersen and Newman, 1973). In this gerontological study, which is focused particularly on older women, age and sex, as well as marital status and number of children, were factors of interest.

Enabling (ability to use): If resources are plentiful and health-care services are easy to access, they may be more frequently used. This involves family resources (e.g. income), community resources (e.g. number of health facilities in the location, price of health-care services) and health insurance status (Andersen and Newman, 1973). Although they are called enabling factors, each can either enable or impede the use of health-care services (Andersen, 1995). For example, living in a rural area may be a barrier to access, while living in an urban area may be a facilitator of access. Enabling factors can be influenced by the legislation and economy of the country in question (e.g. type of health insurance or affiliation based on employment). In a developing and familialistic country such as Mexico, these factors are particularly relevant to the investigation.

Need factors (illness level): According to Andersen and Newman (1973), illness was the most immediate cause of health service use; there must be an illness, or a probability of its occurrence, for a person to decide to use health services (Andersen and Newman, 1973). Illness and response factors refer to the way the family or individual evaluates the illness and the way they respond to it (ibid). A need factor may be key for an individual to seek health-care. Some other considerations related to this are barriers in accessing and using health-care services (e.g. disabilities) and the relationship with other factors such as insurance coverage and cost of services (enabling), among others.

2.7.1 Criticisms and selection of the model

The model was developed in the USA context (Andersen, 1968), which is quite different to other countries (e.g. countries with universal health-care such as Canada or the UK) in terms of policies regarding access to and use of health-care services (Chappell and Penning, 1996). Critics have argued that the need factors are overemphasised as the main factor of utilisation (Andersen, 1995; Coulton and Frost, 1982). However, Andersen pointed out that need factors would be the main determinant of health-care utilisation in an equitable society, if no other factors (enabling or predisposing) could be stronger determinants (Andersen, 1968). According to the literature review of Fernández-Olano *et al.* (2006), the majority of studies have suggested that utilisation of health services is strongly related to need factors (Fernández-Olano *et al.,* 2006). More recently, research has consistently shown that need factors are the strongest determinant in terms of access to and utilisation of health-care services; this is described in Brenes-Camacho and Rosero-Bixby's study, which was conducted in Costa Rica (Brenes-Camacho and Rosero-Bixby, 2009; Wandera *et al.,* 2015). It is also McDonald and Conde's (2010) view that need factors are likely to be the most important determinant for the use of health-care services (McDonald and Conde, 2010). However, other studies have concluded that enabling factors account for more variance in health-care utilisation (Lo *et al.,* 2016), while some suggest that the population is similarly affected by need, enabling and predisposing factors (Coulton and Frost, 1982). Several factors may influence the varying results; for instance, in a family-oriented society or one with a privatised health-care system, the enabling factors could be the strongest, while in a country with a universal health-care system, the need factor could be the strongest (meaning more equal, according to Andersen). In a

developing country such as Mexico, and particularly in this research, need factors may not be as strong as enabling or predisposing factors, because older women may require support from their families in order to use the services (as some providers require a derived right before providing access). Moreover, due to the geographical characteristics of the country, location may represent an important barrier to use of health-care services. Thus, Andersen's behavioural model is useful for investigating these factors and their relationship by selecting variables from the MHAS and analysing them according to the model within a quantitative analysis. Since this study places importance on the derived benefits from family (spouse and/or children) in gaining access to and utilising health-care services, enabling factors are key to the research. However, the three components (predisposing, enabling and need) and their interrelationships are examined further.

Andersen and Newman recommended this model as a guide for researchers analysing selected variables in use of health-care services (Andersen, 1995). The model, nearly 50 years old, is enduring and still successful and commonly used because it has expanded to include external environmental factors important for influencing the accessibility of health-care services, such as public policy (Miller *et al.,* 2014), and because it has been used successfully in understanding the dynamics of health-care use for older adults (Fernández-Olano *et al.,* 2006). A considerable amount of literature has been published using this model **(**Phillips *et al.,* 1998). It has been used in many countries over the years because it has characteristics such as flexibility and adaptability that make it suitable for modern research (Willis *et al.,* 2010) and adaptable for gerontological research (ibid); in fact, it has been utilised vastly in this field (Fernández-Olano *et al.,* 2006). It is also suitable for quantitative research (Phillips *et al.,* 1998), and can be applied in different contexts such as developed and developing countries (see section 3.1). Indeed, it has previously been used effectively in a Mexican context (Rivera-Hernandez and Galarraga, 2015; Salinas *et al., 2*010), which is one of the reasons it was selected for use in the quantitative component of this study as a conceptual framework. Looking at the model itself, it may appear that there are many variables to consider in order to evaluate the use of health services. However, because of its flexibility and adaptability, researchers can choose which variables they want to include (Willis *et al.,* 2010).

Another option considered was the seminal socio-ecological model (SEM) (McLeroy *et al.,* 1988), which has been used successfully in gerontological research into access and use of health-care (Willging *et al.,* 2018). However, the SEM considers levels that are not investigated in this thesis (e.g. organisational and community). The five dimensions of health-care access (accessibility, availability, affordability, adequacy and acceptability) set out by Obrist (Obrist *et al.,* 2007) was also considered, but it was discarded because it overlapped with the Andersen behavioural model, which better suited this research.

2.8 Summary

This chapter has justified the selection of theories for the study, which was based on literature and evidence that these theories have worked efficiently in similar analyses. While structured dependency theory has a more economic, global point of view (macro level) and provides a more general approach for analysis, the life course perspective provides an in-depth understanding of women's experiences (micro level) during their life course. Thus, the life course perspective and structured dependency theory were both selected and used as a guide to analysing the data for this research; it was planned that they would be used as a theoretical lens to help understand and explain older Mexican women's access to and use of health-care services in later life.

Later, this chapter explained in detail the selected conceptual framework for the quantitative part of this study: Andersen's behavioural model. Relevant concepts used in this research such as access and utilisation of health-care services, universal health-care and right to health were also discussed.

According to Andersen's behavioural model, predisposing, enabling and need factors are determinants that either facilitate or impede access to and use of health-care services. External factors such as economy and policy in the country under study play an important role in making the three factors and its components more or less significant in predicting access to and utilisation of health-care services. However, the key argument of the model is that in an equal society, the need factor will be the main determinant of access to health-care (Andersen and Newman, 1973). The model provides an idea of the structure of health-care service dynamics; it acknowledges factors such as accessibility, insurance status and the individual's health beliefs, attitudes, values and knowledge. These

determinants, as well as the way they influence access to and utilisation of health-care services among older adults, and more specifically older women on a micro and macro level, are discussed in the next chapter.

Chapter 3: Determinants of access to and utilisation of health-care services

3.1 Overview of the chapter

The preceding chapter introduced two interrelated terms vital for this research: access and utilisation of health-care services in light of the Andersen behavioural model. Access itself can be a determinant of utilisation; other determinants (e.g. barriers) also interact in older adults' decisions about use of health-care services. This chapter is the result of a literature review on the determinants of access to and use of health-care services. It also includes a review of the strategies used to cope with barriers. It is organised according to the Andersen behavioural model, following the structure of predisposing, enabling and need factors. It takes into account the life course perspective and the structured dependency theory, which have led this study (Chapter 2), as well as the research questions (see section 1.5). It mainly explores research on women, the way they gain access to and use health-care services, and the way policy and economy influence their dependence on others for health-care in a global context.

The term barrier is used in the literature to indicate problems, impediments or factors that obstruct access to health-care services (Rodriguez-Galan and Falcon, 2009). Any barrier to obtaining the full range of necessary health-care can have consequences such as under-treatment or lack of treatment of a disease (utilisation) (Duggleby *et al.,* 2004), which affects health (Taylor and Hoenig, 2006). Research has provided evidence for policymakers and contributed to initiatives for reducing the barrier effect in order to provide wider access and increase the utilisation of health-care services by the older women who need it. The investigation of barriers and facilitators in access to and use of health-care services can contribute to detect which subgroups are being affected, and governments may take action to mitigate the negative effects that such barriers may exert on older adults. An example of barriers and facilitators within the Andersen behavioural model is that an enabler factor can also be a barrier (e.g. income can be a facilitator, while lack of income can be a barrier).

Due to limited research on the topic that involves older women in Latin America, this study draws on available literature from both the region and other countries such as Colombia, India, Taiwan, South Africa, Dubai, Australia and Uganda; this has provided rich information and a global perspective. However, it is relevant to note that determinants of access to and utilisation of health-care services vary depending on the policies of each region and other interrelated factors. Thus, Chapter 4 focusses exclusively on Mexican evidence and policy. In the following sections, the literature is discussed according to predisposing, enabling and need factors. The strategy for finding the relevant literature for this thesis was systematic; it was carried out using relevant databases and various search terms (see Appendix A).

3.2 Predisposing factors

As mentioned above, predisposing factors are characteristics that make people more or less likely to use health-care services, such as age, sex, gender, marital status, knowledge of available health services and education (Andersen and Newman, 1973). The next subsections discuss how these factors are relevant determinants in access and use of health-care services by older adults, especially older women, according to the reviewed literature.

3.2.1 Age

Due to epidemiologic and economic conditions, older adults are a population in need of affordable health-care services (Jacobs-Lawson *et al.,* 2007). There is evidence that at an older age, the likelihood of acquiring diseases, disabilities and chronic conditions increases, and as a consequence, the utilisation of health-care services increases as well (Gong *et al.,* 2016). This could explain why older adults use health-care services more than the younger population (Evashwick *et al.,* 1984; Fernández-Olano *et al.,* 2006; Hudson and Nolan, 2015).

Some countries provide universal health-care access to older adults, while for others it becomes more difficult to access health-care at this age. American literature provides evidence that the cost of health insurance in the USA is linked to age; the older the individual, the more expensive the services, and this may be a reason why some people in the USA prefer not to buy health insurance (Jacobs-Lawson *et al*., 2007). However, in the

USA, most 65-year-olds are eligible for the Medicare service (a health system administered by the government) (Schumacher *et al.,* 2009). Eligible individuals obtain a free 'part A', which normally costs $411.00 a month and consists of basic medical care; they can upgrade the coverage by making payments to Medicare (Medicare, 2016). It is important to remember that some older adults in the USA have no pension, or their income is lower than when they were working, and older adults may experience widowhood at this age, which impacts on their finances and their ability to pay for health insurance. These access conditions may lead to financial barriers in accessing and using health-care services for disadvantaged groups such as older adults.

The age eligibility for the various health-care providers in Mexico is explained in sub-section 4.2.1. It varies depending on the provider. Some are linked to formal work conditions; some, such as IMSS, have the option to affiliate by paying annual fees, but one of the requirements is not to have any previous health conditions such as diabetes, congenital conditions, mental or chronic degenerative diseases among others (IMSS, 2019), and it may be more difficult to meet this condition at an older age. Other providers offer the option for the workers to derive rights to their spouses, parents and/or grandparents when certain conditions apply, such as co-residence or financial dependency (IMSS, 2016; ISSSTE, 2015). Finally, there are initiatives such as SPS that grant access to basic health-care services free of charge for disadvantaged groups (SPS, 2019).

Qualitative research has been conducted on discrimination by age. A study carried out in Bangladesh showed that discrimination due to age and gender was one of the top three barriers for older women when accessing health-care services (Hossen and Westhues, 2011). Negative attitudes from doctors experienced by older women affected the way they perceived the service received; the, participants identified that they did not feel they were being treated the same as when they were younger (ibid). This age discrimination caused concerns about the quality of care they were receiving (ibid). Discrimination due to age has also been detected in Lithuania, where a study revealed that older adults felt discriminated against due to their age and gender; they explained that they felt younger people disrespected them in public places such as hospitals (Selli *et al.,* 2016). A lack of positive attention can make patients feel as though, given they are older, they should be preparing for death, or that they are not a priority for care, or that treatments would not be effective

for them. This can be based on prejudices relating to older adults accessing health-care services (Hossen and Westhues, 2011), and can discourage them from seeking health-care. Discrimination may affect older women's confidence about going to the doctor, and as a consequence they may avoid having regular check-ups, which constitutes a further barrier to using health-care services. Complaining about discrimination may be a strategy for older adults in overcoming this barrier, though in the Lithuanian study, the participants explained that they were afraid to complain, especially in rural areas, because of the negative consequences it might have for them such as conflict with doctors or losing the right to use health-care services (Selli *et al.,* 2016).

Age may also be seen positively, and predispose older adults to use health-care services. In some cultures, such as the American, older people could be expected to receive support from others (Antonucci *et al.,* 1987). In relation to the support received from children, a study in the Netherlands comparing different ethnic groups found that the older the parents were, the more likely they were to receive support from their child(ren) (Komter, 2008). However, this type of support was personal/instrumental, and not directly related to access to and use of health-care services. Similar support patterns may be found in familialistic societies such as Mexico (see sub-section 3.3.4). People in Mexico who are older than 60 may benefit from initiatives focused on the older population, which could contribute to reducing the barriers to accessing health-care services (such initiatives could include cheaper transportation costs and more frequent health check-ups).

3.2.2 Sex

Epidemiologic conditions vary from place to place, influenced by factors such as sex, genetics and health policies (Redondo-Sendino *et al.,* 2006; Wong *et al.,* 2007). Since women and men have different predispositions to acquiring certain diseases (Salgado-de Snyder and Wong, 2007) it is relevant to investigate the way sex impacts on access to and utilisation of health-care services. Disparities have been attributed to socioeconomic, physiological, hormonal and genetic factors (Tannenbaum *et al.,* 2003).

Sex is a biological fact, while gender implies the activities and lifestyles of men and women; sex and gender are correlated, because being a woman may lead to a different lifestyle that impacts on access to and utilisation of health-care services, even though this is not always the case. In Mexico, some jobs are performed predominantly by men or women;

for instance, in the country's oil company (PEMEX), 80% of the workers were men and 20% women during the years 2005-2007 (Ibáñes, 2019). In the next sub-section, the impact of gender on access to and utilisation of health-care services is explored.

3.2.3 Gender

There seems to be evidence that while women live longer, it does not mean they live better; in fact, they experience more disabilities and more years living in poor health, because the possibilities of acquiring a disability increase with age (Puentes-Markides, 1992; Salgado-de Snyder and Wong, 2007; Tannenbaum *et al.,* 2003). Statistics show that the prevalence of chronic diseases is higher among Mexican women than Mexican men, and more generally, research shows that Mexican women over 50 are more disadvantaged than older men in terms of health status (Puig *et al.,* 2006). This may explain why various researchers in Latin America, India and other countries have confirmed that women use health-care services more than men (Evashwick *et al.,* 1984; Sanjel *et al.,* 2012; Tannenbaum *et al.,* 2003). Compared with men, women live in worse health conditions (Zavala and Caballero, 2014). Women have different health concerns and priorities, and health-care providers should be aware of these in order to meet women's specific health-care needs (ibid).

Because of their gender roles, older men and women experience different levels of participation in the workforce and education (Wong *et al.,* 2007). Researchers recommend, particularly in developing countries, that policies are created according to gender conditions (Salgado-de Snyder and Wong, 2007). This is because in most developing countries, older women are generally disadvantaged compared with men when it comes to accessing health-care services (ibid); an example of this is provided in sub-section 3.3.1. In developed countries, the inequality gap is smaller due to universal health coverage, more family/maternity friendly policies and higher levels of education and better work conditions for women (Bachelet, 2015; Grant and Behrman, 2010; Mandel and Semyonov, 2005).

As underlined in the last paragraph, maternity and child-raising may be one of the reasons why women quit their job or studies; it is causative of the poor participation level of women in the workforce. Mothers, particularly single mothers, may also find it more difficult to balance their time between childcare and work; thus, they may choose to work

part-time, or in the informal sector. The situations faced by women are often different to those faced by men, which has implications for the access to and utilisation of health-care services, especially in countries such as Mexico, where access to health-care is gained mainly through formal employment: affiliation (Chapter 4). There is a complex relationship between gender, poverty and ageing, starting earlier in life and leading to inequalities (Salgado-de Snyder and Wong, 2007). Worldwide, older women tend to live in poorer conditions than men (ibid); thus, it can be said that they are a disadvantaged group.

As mentioned in sub-section 3.2.2, epidemiologic conditions vary by sex (biological), but also according to gender roles. There is evidence from research which used MHAS dataset stating that in Mexico, older men took roles as economic providers (Gomes, 2007) and were exposed to long and heavy workloads physically and mentally (Salgado-de Snyder and Wong, 2007), which affected their health. Men engage in more risky behaviours than women, such as smoking, drugs, driving fast and not seeking medical and nutritional advice (ibid). These activities put men at risk of accidents, cancer, lung diseases, cardiovascular conditions, depression and anxiety (ibid). On the other hand, the older generation of women in Mexico experienced high fertility, and dedicated considerable amounts of time to domestic chores and caregiving for many years of their lives (ibid). The likelihood of presenting with impairment in ADLs and being functionally dependent is higher for Mexican women (Zavala and Caballero, 2014). This may be related to higher life expectancy, female roles, disadvantages faced earlier in life and biological factors such as genetic predisposition.

Puentes-Markides (1992) found in a literature review that women's access to the health-care system in Latin-American and Caribbean countries depends on several interacting factors, such as their socio-economic situation, the degree of social investment in women, control over decision-making and their experiences in the workforce. Decision-making is a social determinant of health-care utilisation; in some cultures, it is common for older women to consult with family first in order to get advice about health issues when they get sick. In a study conducted in Bangladesh, older women said that their husbands played an important role in their health decisions, so they informed men in the first instance about their health issues (Hossen and Westhues, 2010). In the same study, the older women said that their social status was lower than other family members (ibid), a fact that limited their

autonomy in decision-making and had a negative impact on their utilisation of health-care services (ibid). Use of preventive services may help to avoid diseases; however, for Bangladeshi women, it may be considered inappropriate to go to the doctor without any symptoms or family history of a particular disease (ibid). The same researchers, in a later study, also found that older women in Bangladesh felt uncomfortable using government health-care services because of their gender, as they had previously experienced disrespect and discrimination (Hossen and Westhues, 2011). Discrimination against women may make it more challenging for them to access and use health-care services (Belgrave, 1994; Duggleby *et al.,* 2004). It is expected that because of the inequalities faced by women, they have a different experience of the barriers in accessing and using health-care services from that of men. For instance, in a study conducted in the Western Pacific region, six countries had a high percentage of women who were not willing to go to the health-care centre alone, did not have permission to receive treatment, or were concerned about the sex of the staff at the centre (World Health Organisation, 2011; Ravindran, 2012). These situations might not be the same for men. Research has also indicated that some groups of women (older Asian women in Britain and older women in Bangladesh) express strong preferences for female doctors (Ahmad and Walker, 1997), and if there is no female doctor available, it may affect health-care delivery (Hossen and Westhues, 2010). Therefore, policy plays a relevant part. For instance, in Mexico, some research suggests increasing the number of female providers in order to enhance cervical cancer screening (Watkins *et al.,* 2002). A gender-sensitive health system has been proposed in order to help women overcome these barriers (Ravindran, 2012).

3.2.4 Marital status

Marital status may have an impact on access and utilisation of health-care services; it varies according to the population in question. For instance, research in Nepal shows that marital status has a significant association with the utilisation of health-care services, in that widowed individuals use health-care services more often than married and single individuals (age was another determinant that had a significant association with utilisation of health-care services) (Sanjel *et al.,* 2012). In contrast, a study conducted in Taiwan found that those with a spouse were more likely to use health services (Chang *et al.,* 2010). This could be related to the support a spouse can provide when using health-care services, or

to the programs available for certain groups (e.g. discounts when purchasing health insurance for a couple instead of a single individual). In a study carried out in Ireland, married adults were more likely to be health-insured (relating to extension of cover to children) than those who were single (Harmon and Nolan, 2001). Divorced, widowed and separated people had the lowest coverage rates in the study (ibid).

The USA is one of the countries that lacks universal health insurance; it has a complex system based on employment and marriage. For instance, workers with better employment opportunities and remunerations, along with their spouses, have access to a more complete health insurance (Angel *et al.,* 2011). To cover/include a spouse in one's health insurance is also common in Mexico; this way, even if one member of the couple is not in employment, they are still covered by the spouse's policy. This may lead to a disadvantage for those who divorce and later find themselves in need of health coverage in old age. However, there are programs that benefit this population (e.g. free basic health-care access for the financially disadvantaged in Mexico through SPS).

Support from a spouse can come in many forms (e.g. help with transport to visit the GP, encouragement to use health-care services). Nevertheless, this kind of support can also be provided by children or other family members. In terms of social and intergenerational support in Mexico, research from previous studies has found that widowed or single older adults are less likely to receive help, followed by those divorced or separated; it is the married or those in civil unions who are more likely to receive support when facing difficulties (e.g. illness or accidents), due to their more extensive social networks (Villegas *et al., 2*014). Thus, marital status is a factor in receiving support in Mexico.

3.2.5 Knowledge of health-care services

It is important to assess older adults' knowledge about the health-care system and available services (Jacobs-Lawson *et al.,* 2007), because the utilisation of such services can be influenced by the related information an individual holds. The availability of information about health-care services is related to other factors such as location; for instance, research has shown that older women living in rural areas of Canada may have limited formal health knowledge (Wanless *et al.,* 2010) due to the isolation of their rural area. They may receive less health information such as advertisements and pamphlets, they may be less likely to know workers in the health-care sector, and have limited social networks;

there are also other factors such as cold weather. These issues can make it more challenging for them to access health-care services compared to older urban women (ibid).

In order to make decisions and make use of services, older adults need to know their options (Jacobs-Lawson *et al.,* 2007). Jacobs-Lawson and colleagues conducted a study in Kentucky USA (ibid) in which they researched older adults' knowledge of the three main health insurance options in the USA (Medicare, Medigap and Long-Term Care). They found that age was the only significant predictor of knowledge in their study, especially among women; the older the participants, the more knowledgeable, as was expected by the researchers (ibid). The information that individuals receive in order to make decisions about their health in later life is a determinant for accessing and using health-care services. This factor, in contrast to other predisposing factors, can easily and rapidly change (e.g. by reading or asking for information), while perception (see sub-section 3.4.1) (based on knowledge of health-care services and experiences) and other factors may take longer to change.

Knowledge of services or basic health information for making health decisions is also referred to as health literacy, and is related to an individual's level of educational attainment (Nielsen-Bohlman *et al.,* 2004; Sudore *et al.,* 2006). The Rapid Estimate of Adult Literacy in Medicine (REALM) is a test used to measure health literacy, in which 66 common health terms are provided to the participants in order to evaluate their health literacy level (Sudore *et al.,* 2006). A study conducted in 2006 by Sudore and colleagues found that limited literacy was more common in older adults with chronic conditions, as well as those with worse self-rated health (ibid). It could be expected that those with worse health and chronic conditions use health-care services more and gain health literacy as a result of that experience. However, older people with limited health literacy were also likely to report the lack of a regular source of health-care (e.g. doctor or health-care centre that they could visit regularly); this was an indicator of health-care access in the study. The study found that women had higher health literacy than men; the authors stated that this might be because women have more contact with the health environment through activities such as caring for others (ibid). The role of media, governments and marketplaces and the way they present health information are also important; it should be appropriate for the older adult audience (Nielsen-Bohlman *et al.,* 2004). In the present study, lack of

knowledge may be an important factor impeding access to and utilisation of health-care services in Mexico, and so it is researched in the qualitative part of the study.

3.2.6 Education

Education is an indicator of economic potential, social class and possession of information/knowledge that may facilitate the access and utilisation of health-care services. It has also been associated with the perception of diseases (see sub-section 3.4.1). While some researchers have used education as an enabling factor (Rivera-Hernandez and Galarraga, *2*015, Salinas *et al., 2*010), in this research it is instead considered a predisposing factor, as it can be seen as a prior step to income and employment (listed in enabling factors); this makes more sense within the structure of the quantitative analysis.

Research in Dubai (Al-Yousif *et al.,* 2014) and Nigeria (Sule *et al.,* 2008), two very different countries culturally and economically, has identified poor education as a barrier to use of health-care services. In Mexico, lower levels of education have been related to poor utilisation of outpatient services (Bautista-Arredondo *et al.,* 2014). Other Mexican research has shown that illiteracy and lower education are barriers to accessing social protection programmes and are associated with poverty (Salgado-de Snyder and Wong, 2007). Older women are more vulnerable to poverty than men, especially in rural Mexican areas, where a higher proportion of older women have no formal schooling (Salgado-de Snyder and Wong, 2007). Twenty-six percent of women and 18.1% of men aged 65 and older are illiterate in Mexico (INEGI, 2016). Those aged 60-74 represent 12% and those over 75 represent 26% of the illiterate population in the country (INEGI 2020). A qualitative study on older Mexican women's life experiences showed that some participants were banned from work and study when they were younger, either by their fathers or husbands (Makita, 2012); this is consistent with quantitative research carried out by the National Institute of Statistics and Geography (INEGI) (see sub-section 4.2.3). The limited access to education for women in earlier decades was the result of a patriarchal society with a strong belief that women's place was in the household, raising children, taking care of family members and doing chores such as cleaning and cooking (INEGI, 2016; Makita 2012). The SABE (Survey on Health and Wellbeing of Elders) study conducted in Mexico City showed that older women tend to be married and to not participate in the formal labour market

(Gomes, 2007). By 2018, 50% of Mexican women over 50 did not work because their time was dedicated to household chores (INEGI, 2020). Since education is related to income and work, older women are in a disadvantaged position in this matter and, as a consequence, in accessing health-care services (see sub-sections 3.3.1 and 3.3.3).

3.2.7 Location

It was difficult to decide whether location should be included with the predisposing factors as it is, or if it should be listed as an enabling factor as Andersen suggested (Andersen and Newman, 1973). It was included here because it fits better in the quantitative study; this is because the information in the MHAS about location is limited (four locality size options), in the study it was narrowed to urban-rural areas, and thus is more of a demographic characteristic. If location would be explored further (e.g. quantity of available services in an area or distance from a health centre) it would have been included with the enabling factors.

For older adults, access to health-care services may be influenced by location factors. It is expected that in locations with a higher number of inhabitants, more and better health-care services will be available (e.g. inpatient procedures); on the other hand, there could also be more demand for services. Therefore, location of health-care facilities has a significant effect on the utilisation of health-care services (Ryvicker *et al.,* 2012). The literature has shown that citizens living in areas with more services have greater access to health-care services (Young *et al.,* 2001), while those living in remote areas experience limited access to health-care services (Gong *et al.,* 2016). Living in a Canadian rural area rather than an urban area has implications for older women's health, because it can be more challenging for them to access health-care services than urban older females (Wanless *et al.,* 2010). There is evidence that older adults living in Canadian and Croatian rural areas use fewer health-care services such as General Practitioners (GPs), specialists and dentists compared with their urban counterparts (McDonald and Conde, 2010; Vadla *et al.,* 2011). Conversely, in Canada, older adults who have lived in rural areas for a long time may have more social networks and stronger ties with their community (Wanless *et al.,* 2010); these social networks can provide help such as transport, sharing information about medical treatments and providing economic or moral support. On the other hand, in the USA's rural areas, there exists a sense of self-sufficiency (Goins *et al.,* 2005), which may

lead older adults to decide not to seek medical care, self-medicate or underuse the available health-care services (ibid).

In Mexico, location is an influential factor when it comes to utilisation of health-care services. In the 1950s, Mexico was a mainly (57%) a rural country (<2,500 inhabitants per location) (Treviño-Siller *et al.,* 2006); by 2020, the percentage of the rural population had reduced to 21.4%, of which older adults represented a high proportion (INEGI, 2020). This may be because during the industrialisation period, younger citizens moved to urban areas to work, leaving older adults in the rural areas (Salgado-de Snyder and Wong, 2007). Moreover, there is a lack of transport systems and communication technologies in Mexican rural areas, and it is common for older women not to drive or own cars, compared to men (INEGI, 2007).

Some locations can be further away from health-care services than others. Longer distances can affect older adults' decision about whether to use health-care services. Other conditions such as unfavourable weather, bad quality roads, unavailable means of transport and the cost and time taken to travel to the health facility can worsen the situation (Hossen and Westhues, 2011).

Even in developed countries such as the USA, distance is a barrier to receiving health-care (Nemet and Bailey, 2000; Syed *et al.,* 2013). Another study in the UK showed that patients who live closer (one mile) to health-care centres utilise health services more than those who live further away (five miles) (Field and Briggs, 2001). There are many remote areas in Mexico, and it is expected that this study will find distance to be a barrier for those living in rural areas.

3.3 Enabling factors

Enabling factors refer to the ability to use; they facilitate or impede the use of health-care services. For example, the presence of a necessary resource (such as income) can facilitate access, whereas the absence of that resource (lack of income) acts as a barrier (Andersen, 1995; Beyeler *et al.,* 2015).

3.3.1 Income

In countries with highly privatised health systems such as Bangladesh, poverty (lack of income) itself is a fundamental social determinant of health-care utilisation, especially in rural areas (Hossen and Westhues, 2010). In the study, older women said that because men were more involved in economic activities, they had priority in accessing medical treatment (ibid). This represents a financial barrier for women, because traditionally they do not have access to means of production (ibid). This kind of disadvantageous situation faced by older women relates to power in the relationship and gender roles. In the study, older women identified their lack of income as 'the root of many of their problems' when they were asked why they did not seek medical help (Hossen and Westhues, 2011:1102).

Puentes-Markides, in a literature review research focused on Latin-American and Caribbean women, identified the ability to pay for health-care services, employment and economic status as the major determinants of access to health-care services (Puentes-Markides, 1992). Nonetheless, the study is not up-to-date, and the literature on Latin-American women and access to health-care is limited compared to the American and European literature on the same subject. In a study conducted in Costa Rica, it was found that people of higher socioeconomic status were more likely to use preventive services (Brenes-Camacho and Rosero-Bixby, 2009). However, in countries where access to health-care is free at the point of use (tax-financed), income may not be a major determinant, because people of both high and low income can access the same services; this is the case in Canada (Chappell and Penning, 1996; Evans, 2002). Income might be a major determinant in countries where the only option for citizens is to pay at the point of use. In Mexico, being insured and having higher income influences both the utilisation of outpatient services and the selection of health-care provider (Bautista-Arredondo *et al., 2*014); this could be related to the fact that the private sector is recognised as being of better quality than other health-care services, and thus a better income may result in the benefit of obtaining better health-care services (see sections 4.2 and 4.4).

Financial and cost barriers are related to each other. A macro-level barrier can be when the costs of health-care services are expensive and the population in general struggle to afford them (cost barrier), and a micro-level barrier when the financial situation of the patients is crucial and they cannot afford health-care services (financial barrier). These

barriers are also related to other costs such as transportation; some older adults cannot afford transportation costs, and so miss the opportunity to attend their consultations (see sub-section 3.3.5). Research conducted in the USA has found that low-income adults have higher rates of being uninsured and face more barriers in accessing and using health-care services (Sommers, 2006). A qualitative study conducted in the USA found that in order to cope with the high costs of medication, older adults adopted strategies such as reducing their dosage or substituting it with alternative medicine, reducing other expenses in order to pay for the prescription, relying on family members or buying the cheapest available medication (Goins *et al.,* 2005).

Employment, health insurance and income are closely related variables. Income is a result of employment, but not the only source of it, health insurance may be a benefit of employment but can also be purchased by those with enough income. Health insurance and employment are explored in the next two sub-sections.

3.3.2 Health insurance

Health insurance is a mechanism that reduces or eliminates the out-of-pocket payment at the time of receiving a service (Ravindran, 2012). It allows people to pay fees in advance and avoid catastrophic expenses in the case of disease or accident. Health insurance is a key factor of study in this research. Each of the research questions in this thesis (see section 1.5) refer to 'access'. In Mexico, there is no single provider of access to health-care for the whole population; instead, several providers serve different groups. Therefore, access can be obtained through various providers and means (see section 4.2). Access can also referred as affiliation to a health-care provider. Having health insurance coverage in the US has been associated with higher use of health services (Xu *et al.,* 2006); still, being insured does not necessarily mean the person will make use of these services (Gold, 1998; Puentes-Markides, 1992; Young *et al.,* 2001), because the need factor is also a big determinant of use (see section 3.4). This is why health insurance has an enabling factor nature.

In many developing countries such as Mexico, for those working in the formal sector, there is a compulsory social security payment usually deducted from their salary; in this way, they make small contributions and thus cover themselves, their dependents and in some cases the rest of the population (Ravindran, 2012). This may include other benefits such as

pensions. However, this system excludes those who do not work in the formal sector or are not covered by a derived right from a worker in the formal sector (Ravindran, 2012). In Mexico, the percentages of older men and women affiliated to a health-care provider have been similar (slightly higher for women) over the last few decades (Parker *et al.,* 2015), but the means of access may vary; many women access these services as dependents (through derived rights) rather than through their own employment.

Health insurance is related to other factors, for instance income; in a population-based generalisable study conducted in the USA, which took into account income, education, geographic region, ethnicity, marital status and employment in order to examine which factors were influencing the utilisation of medical care services, the groups less likely to be insured and make use of health-care services were women with fewer years of education, lower income groups, Hispanics, African-Americans, the unmarried and the unemployed (Hsia *et al.,* 2000). Health-care insurance status and income were the most significant determinants of health-care utilisation (ibid). These results are not surprising, because in the USA health-care services are highly privatised. Other studies in the USA have found that women with no health insurance had worse health status, indicating a need for access to health-care (Xu *et al.,* 2006). The same study also demonstrated that women between 55 and 64 years old are more vulnerable to lack of health insurance because at that age they are not yet Medicare-eligible (Medicare covers those over 65 years old).

Health insurance (access) has been linked to utilisation of health-care services. In Colombia, recent studies using Andersen's behavioural model have found that the enabling factors have held the highest weight in logistic regression models predicting utilisation; the type of insurance (subsidised), together with urban locations and wealth, was highly associated with utilisation of health-care services (Garcia-Ramirez *et al.,* 2020). Generally, in Latin-American countries, there is a pro-rich inequality of utilisation of health-care services (ibid). Research carried out in China found that older adults with health insurance were more than five times likely to be hospitalised than older adults without health insurance (Yawen *et al.,* 2006). In Mexico, it has been documented that insured adults are more likely than uninsured adults to use prevention screening services for high cholesterol, hypertension, cancer (breast, cervical and prostate) and diabetes (Pagán *et al.,* 2007).

An example of the way insurance mitigates the effects of payment at the point of use and impacts on the utilisation of health-care services can be found in the Irish health-care system, where the impact of user fees is consistent with international research (Hudson and Nolan, 2015). In Ireland, part of the population pays for the full cost of consultations at the time of use while for others it is free (this is regulated and depends on factors such as income and age) (ibid). A one-year experiment was carried out, monitoring several groups of older adults according to their level of access to free health-care. As the researchers expected, the results showed that the 'no cover' group (those who had to pay the full price of consultations) made the lowest number of visits per year, while those who received free health-care at the point of use engaged in the highest utilisation of health-care services (ibid). Need factors were significant in the study, and the fact that older and poorer adults were within the group who received free health-care should be noted. From this research, it can be concluded that the eligibility of the public health-care system in Ireland has a high statistical significance in the utilisation of health-care services. Older women in Mexico also benefit from being eligible for free health-care (SPS), even though the coverage is limited. However, the Mexican government has aimed more towards universalisation than an eligibility strategy like the Irish system. This may have an impact on the quality of services, and older women may still be disadvantaged in Mexico in terms of specific services not covered by SPS.

According to Tannenbaum and colleagues, who have conducted qualitative research in Canada exploring older women's health-care concerns, 'The current health-care system does not meet the global health-care needs of older women' (Tannenbaum *et al.,* 2003:4). They proposed that optimal care for women would involve an understanding of their priorities and perceptions about what they need and want from the health-care system during the ageing process (Tannenbaum *et al.,* 2003). Notably, Mexican older women, according to a qualitative study, are not satisfied with the services provided/subsided by the government (IMSS) and prefer private medical care if possible; **'**the economic support the women have access to by means of their own and/or husband's income (or widowhood pension) or from their adult children, as is the case for many of them, becomes crucial for determining the kind of health services available to them' (Makita, 2012: 144). Nonetheless, the factual base of this belief (preferring private health-care due

to better services) has not been fully researched in developing countries (Bushelle-Edghill *et al.,* 2015). What is known is that the percentage of people with private health-care insurance in Mexico is very low (7.6%) (Casares, 2015); paying at the point of use (out of pocket) is probably more common, for instance when using health-care services at pharmacies (see section 4.4).

Many barriers can be related to health insurance, such as problems with insurance policies. A qualitative study conducted in the USA about older women overcoming barriers in accessing health-care services found that they were experiencing insurance barriers (issues with insurance plans, long waiting times for reimbursements, non-coverage of certain diseases) (Duggleby *et al.,* 2004). They overcame these by persevering and seeking support and advice from friends and family (ibid).

Discussion of health insurance at a macro level is relevant in terms of government policy; governments make decisions such as eligibility requirements for affiliation or subsidies, privatisation of services, costs of services and budget for research. These decisions will affect who is accessing health-care services and the implications for the poor, women, older adults, the working population and other subgroups. Governments try to provide efficient health-care to their populations; this represents a challenge (Schoen *et al.,* 2007). 'Equality represents a challenge for many Latin American health systems' (Garcia-Ramirez *et al.,* 2020:1). Changes in public policies and funding can reinstate access barriers (Evashwick *et al.,* 1984); however, they can also contribute to helping those most in need and promoting equality. The Mexican government has made it clear that it is looking to universalise health services passing from employment and derived rights as means to gain access to be fully universal. This is explained further in sub-section 4.2.4 on SPS (health-care reform).

3.3.3 Employment

Research has found that when it comes to utilisation of health-care services, employment status is an important variable (Puentes-Markides, 1992). As mentioned previously, in many developing countries such as Mexico, affiliation to health-care is gained mainly through participation in the formal labour sector, which also provides with social security to employees and their dependents (Salgado-de Snyder and Wong, 2007). For older people, employment history may be relevant, as health-care services generally provide

access to pensioners who worked in the formal workforce for a certain amount of years (variable) and to their dependents or widows (ibid). This has an influence on the importance of the employment status for older Mexican women to access health-care services, considering that they did not work in the formal sector as much as men.

Some health-care systems, usually in developed countries, provide universal health-care access regardless of employment conditions, which makes employment status a weak variable in access to health-care; this is the case with tax-financed health services such as those in Canada, Finland, Sweden and the UK (Evans, 2002; Wodchis *et al.,* 2015).

3.3.4 Family

Family is a source of support for older adults (Smyer and Hofland, 1982) (e.g. financial); research has found that having adult children has beneficial effects on parents' wellbeing (Umberson *et al.,* 2010). Another study has found that older parents are more likely than childless older adults to have a weekly visit, presenting older parents as an advantaged group compared with childless older adults in terms of receipt of help and social contact in England (Grundy and Read*,* 2012). Other ways that family members provide support to older adults include accompanying them to doctor's appointments and paying for medication.

Older adults may need family members to accompany them to their medical appointments for reasons such as religious practices or culture (Hossen and Westhues, 2010), recent hospitalisations, possible mental illness (Wolff *et al.,* 2014), difficulties walking or disabilities such as blindness or deafness. Nevertheless, family members have occupations, and it may be difficult for them to find time to help older adults: for instance, if there is an emergency but nobody is home, or if consultations are scheduled at a time when family members are busy, or if they live far away. Adult children having their own child(ren) is also a factor that has been found to prevent them from giving support (e.g. advice) to their parents (Komter and Schans, 2008).

An 'interdependence throughout the life cycle' has been noted in relation to divorce, affecting patterns of family support in the USA (Smyer and Hofland, 1982:68). Intergenerational support varies; there are places in Latin America where levels of support are high. In Colombia, 50% of older adults living in rural areas were financially dependent

on family members (Gomez *et al.,* 2009). The Colombian coffee-growing areas are known for having strong child-parent relationships; families share the same house, assume responsibility for the older members and provide emotional and financial support. Nevertheless, this varies from family to family (ibid). Interestingly, the Colombian and Mexican health-care systems work similarly.

In Mexico, the social security programmes that include health-care (e.g. IMSS, ISSSTE) also cover workers' parents (and in some cases their grandparents) if they are financially dependent on the workers (Ravindran, 2012; ISSSTE, 2015). A qualitative study on Mexican women's experiences showed that older Mexican women felt supported by their children in accessing health-care and confident to ask them for money to pay for their medical expenses; indeed, many of the participants in the study depended financially on their children (Makita, 2012). Some Mexican women were 'collecting a care debt', meaning that they happily accepted the reciprocal support from their children as an exchange for the care provided earlier in life, and did not feel like a burden to their family (Makita, 2012:165). A quantitative study using data from the National Family Dynamics Survey (ENDIFAM) in Mexico found that the older population indeed has an active role in giving support to and receiving support from their families; however, with increasing age they are less likely to give support to others (Villegas *et al., 2*014).

Research on reciprocity carried out in the Netherlands (including different ethnic groups) has found that having children increases the likelihood of being a receiver of support (e.g. advice, practical help) (Komter and Schans, 2008). However, the study did not focus on support in accessing or using health-care, but instead support in general. In Mexico, the fewer children women have, the fewer 'potential providers' (financial and non-financial) they may have. A study on the reduction of fertility in recent decades has shown that the total fertility rate decreased from 6 in 1976 to 2.8 in 1988 (Díaz-Venegas *et al., 2*017; Villegas *et al., 2*014:5) (using data from MHAS). The study found that older adults' receipt of support varies depending on the age cohort studied (Díaz-Venegas *et al.*, 2017). A younger cohort (born after 1937) benefited from the decline in fertility, with women in this population who had 0 to 4 children having better economic wellbeing and fewer chronic conditions, while those in the older cohort (born in 1937 or earlier) who had fewer children (0 to 2) had lower economic wellbeing and higher odds of being uninsured (Díaz-

Venegas *et al.,* 2017). There is a 1-2 children disparity in this comparison, and there could be other factors influencing these results. Díaz-Venegas and colleagues' study used logistic regression analysis to predict the odds of being uninsured based on number of children and marital status. For the younger cohort, living in an urban area and being female reduced the odds of being uninsured, and not being married increased the odds of being uninsured (ibid). It follows that being a married woman and living in an urban area was the more advantageous situation for the oldest women in the study. Moreover, the research suggests that adult children are traditionally seen as a primary source of support for older adults (ibid), and younger generations of Mexicans have migrated to urban areas in recent decades.

Regarding number of children, it has been stated, 'On one hand, in the Mexican socio-economic context, fewer adult children may represent fewer opportunities for economic and emotional support to elderly parents. On the other, low fertility may reduce financial and psychological strain caused by raising a large family with limited resources' (Diaz-Venegas *et al.,* 2017:10).

3.3.5 Transportation

Transportation is an enabling factor that has a strong relationship with access to and utilisation of health-care services (Evashwick *et al.,* 1984). It is a basic and necessary step in order to use health-care services (Syed *et al.,* 2013); transportation barriers cause patients to delay, cancel or miss medical appointments. Disabilities and variation in income related to transport may influence the decision of whether to obtain health-care. For instance, patients with walking disabilities living in the outskirts of a city who have means of transportation (e.g. a driver and/or car in the household) may have no problem accessing health-care services, while patients with walking disabilities living in urban areas who do not have means of transportation have to walk to the health-care centre because they cannot afford the transportation costs (Syed *et al.,* 2013). Higher income enables older adults to use faster transport means, such as flights instead of trains, or a car instead of a bus; this may influence the decisions of older adults about whether to attend consultations or not. In other words, distance barriers can be overcome by investing economic resources and implementing transportation strategies. Transportation barriers in rural areas may mean that patients have to travel long distances or out of town to obtain health-care, or

that the roads are in bad condition or there is a lack of public transport (Goins *et al.,* 2005). Distance and transportation barriers are related.

In the USA (a very large country), researchers have found that older people identified transportation problems as one of the most common barriers in accessing health-care services (Fitzpatrick *et al.,* 2004). Internationally, transportation is the most commonly reported barrier in studies on health-care access (Goins *et al.,* 2005; Mamdani and Bangser, 2004; Obrist *et al.,* 2007; Syed *et al.,* 2013).

Initiatives focused on tackling transportation barriers for older adults have been carried out in Mexico; 'Caravanas de la Salud' is a programme whereby mobile medical units (e.g. vans and trailers) travel to remote communities that are difficult to access in order to provide health-care services there (Secretaria de Salud, 2016). Another strategy is the use of discount cards for public transport, flights and bus tickets for adults over 60 in Mexico (INAPAM, 2016). An alternative, used in Bangladesh and other countries to tackle the distance barrier, is tele-health via smartphones in order to publicise useful health information; Bangladesh also has a phone service called 'Health Line Dial 789' with millions of subscribers, providing medical information, consultations and emergency services among other things (Nessa *et al.,* 2008). These initiatives contribute to mitigating the distance and transport barriers in using health-care services. This study investigates whether older women experience transportation and distance barriers and their strategies for overcoming them, as the qualitative part of the research was carried out in rural and urban areas.

3.4 Need factors

This section examines how need factors, specifically the presence of disease or disability, self-rated health and perception influence access to and utilisation of health-care services. Research has found that need factors such as self-rated health, the severity of diseases, ADL limitations (Fernández-Olano *et al.,* 2006) and experience of disease leading to the seeking out of health-care (Lo *et al.,* 2016) to be the strongest determinants. However, the strength of the factors varies according to the population in question, policies and the health-care system's characteristics.

3.4.1 Presence of disease or disability

People with disabilities have been considered a priority population in the effort to make health systems equal (Miller *et al.,* 2014). Miller's study, conducted in the USA, used Andersen's behavioural model to examine the receipt of preventative services (e.g. immunisations, screening tests, counselling) among adults aged 18 and older in order to study the relationship between genders, disability and age (ibid). The results showed that participants with disabilities had a higher probability of receiving preventive services than participants without disabilities; this probability was also higher among older adults than younger adults (ibid). Thus, according to Miller and colleagues' study, age and disabilities are strong determinants for receiving preventive services in the USA. Another study, also using Andersen's behavioural model, spent 30 days monitoring the access to and utilisation of health services for older adults in Uganda (Wandera *et al.,* 2015). The results concluded that enabling and need factors (e.g. disabilities) were the most important determinants in older adults' access to health services (ibid). Having a disability can facilitate faster, cheaper, more frequent or easier access to health-care services, because in some countries regulations give priority to this specific population. On the other hand, having a disability can also be a disadvantage in accessing health-care. In some cases, people with disabilities cannot travel alone to consultations or experience other barriers (e.g. transportation barriers; see sub-section 3.3.5).

Disability itself is not a barrier in access to and use of health-care services. However, an uncompensated-for disability may cause problems in receiving medical attention (Taylor and Hoenig, 2006). For instance, an older adult with a mobility problem can access and utilise health-care services if having means such as a wheelchair, transport or aid to move; conversely, if a person cannot compensate for his/her disability and considers that due to his/her mobility problem he/she cannot go to the clinic, then it is a barrier.

Policies such as making disabled patients a priority may help mitigate the negative effect of disabilities in accessing and using health-care services. A coping strategy used in the USA for difficulties such as walking caused mainly by lower extremity impairment is to have more home health-care visits (Taylor and Hoenig, 2006). However, this results in an increase in health expenses (ibid), meaning that those who cannot afford the service and

those with an insurance that does not cover home health-care visits may face access or utilisation barriers.

Previous studies (Alkhawaldeh *et al*., 2014; Teng *et al.,* 2013; Yam *et al*., 2009) have reported that illnesses and especially chronic diseases, are the main factors in older people's utilisation of health-care services in various parts of the world. For instance, Teng and colleagues' study, based on Andersen's model and conducted in Taiwan (Teng *et al*., 2013), found that self-rated health and chronic disease, among other factors, were significant determinants of emergency health-care utilisation by older adults (ibid). Similarly, need factors (e.g. illness or disease), together with enabling factors, have been significantly related to the utilisation of health-care services by older adults in Hong Kong, according to a study that also used Andersen's behavioural model as a framework (Yam *et al.,* 2009). Alkhawaldeh and colleagues' study, conducted in Jordan, found similar results for utilisation of primary health-care services; they found chronic illnesses to be the stronger utilisation factor (Alkhawaldeh *et al.,* 2014). Even though Alkhawaldeh's and Sanjel's studies are not generalisable at the country level because their data came from municipalities or governorates, it is important to note that similar patterns have been found in different places (Alkhawaldeh *et al.,* 2014; Sanjel *et al.,* 2012). Other factors such as age and self-rated health status were also associated with primary health-care use in the Irbid Governorate of Jordan (Alkhawaldeh *et al.,* 2014). Consistent with these studies, in a study carried out in India, chronic disease was identified as one of the factors that had a significant association with utilisation of health-care among the older population (Sanjel *et al.,* 2012).

Studies conducted in Spain (Redondo-Sendino *et al.,* 2006) and Mexico (Wong and Díaz, 2007) show that disease has been associated with an increase in health-care service utilisation among older people. Moreover, disease is a strong indicator of use of health-care services for older adults; those with universal health coverage are likely to use services in order to treat chronic diseases, while people with no health-care coverage also need the services because chronic illnesses require continuous treatment (Alkhawaldeh *et al.,* 2014). There are cases in which older adults decide not to be treated for chronic diseases (e.g. due to fear or depression); these reasons are explored further on in this study.

3.4.2 Self-rated health

Self-rated health reflects ideas and beliefs from the individual's perspective on their health (Fernández-Olano *et al.,* 2006). It may be based on objective measures of health, such as medical diagnosis, or according to the person's standards (e.g. comparison with other people the same age). This is the reason why it is differentiated from the section above presence of disease or disability; some people may consider their health as good or excellent even when having a diagnosis for disabilities or disease. Thus, for research it is important to differentiate if necessary when selecting variables. In this study the need factor was operationalised as two concepts: self-rated health and beliefs. Fernandez-Olano conducted a study in Spain; the results showed that older adults with poor or fair self-rated health used health-care services twice as often as older adults who rated their health as very good or good (ibid). People with chronic limitations, depression and difficulties with daily life activities were more likely to report their health as poor (ibid). Similar results have been reported in China (Gong *et al.,* 2016).

It can be expected that the thought of being ill or having poor health is reason enough to seek medical care and treatment. The quantitative analysis includes self-rated health as a variable in order to understand older Mexican women's patterns of utilisation of health-care services. Moreover, it is explored further in the qualitative analysis.

3.4.3 Perception

The perception of disease, treatment and health-care systems as determinants of health-care utilisation could be influenced by other determinants such as knowledge of health-care services, education and access to technologies (e.g. health telephone lines, health websites, television and radio). Even when older adults experience symptoms of a serious disease, it is their perception or interpretation of the disease that influences whether they seek health-care (Miller *et al.,* 2014). The perception the patient has about treatment (e.g. chemotherapy, dialysis or surgery) can influence the decision of whether to take action or not. The information a health professional shares with a patient can also influence the perception of the patient, who may perceive the treatment to be painful, non-efficient or expensive; as a consequence, the patient might avoid using the services.

Another reason for avoiding being treated can be that a specific treatment is against a patient's religious beliefs. Even though, according to Andersen's model, religion is a

predisposing component (Andersen and Newman, 1973), beliefs such as accepting destiny, accepting God's will or viewing disease as part of normal ageing may influence help-seeking behaviour and with it the utilisation of health-care services. Due to religious beliefs, women may choose not to receive medical care even when they have the financial resources or family support (Hossen and Westhues, 2010). There are many religions worldwide, and each has its own stance on health issues. It is also important to note that women are more religious than men in Western societies (Walter and Davie, 1998), and in the USA, older women may be more religious than younger women (Pew Research Center, 2017). Studies have pointed out that for Hispanic women (in the USA), culture and religious beliefs play a role in their health practices (Higgins and Learn, 1999). Religious beliefs can also cause an increase in utilisation of health-care services; a study conducted in 2004 in the USA using data from the 'Assets and Health Dynamics among the Oldest Old' survey (AHEAD) found that older adults with higher levels of religiosity also had higher rates of utilisation of preventive services. This could be linked to motivation; followers of some religions, such as Jewish people, are more likely to use preventive services than those of other religions such as Catholics and Protestants (Benjamins and Brown, 2004). Mexico itself is a very religious country; the most recent census results from 2020 indicate that only 10.6% of the population has no religion (INEGI 2020).

Experience affects perception. Previous negative experiences such as long waiting times for a medical appointment, inaccurate diagnoses or short opening times for health centres may create a lack of confidence about receiving health-care (Wendt *et al.,* 2012). These are also called structural barriers; they can relate to the availability, affordability and accessibility of health-care services (Lai and Surood, 2010; Obrist *et al.,* 2007). Long waiting times can discourage older women to use health-care services because they are busy with other activities (Hossen and Westhues, 2011). In a Bangladesh study, older women gave examples of the following problems: doctors did not have enough time for them during consultations, so they were not able to mention two health problems at the same appointment; doctors prescribed the same medication for several problems (and participants did not feel better); medication was not available; and doctors preferred patients to attend their own private clinics (ibid). These kinds of situations influence older women's perceptions and decisions about whether to go back for future check-ups, self-

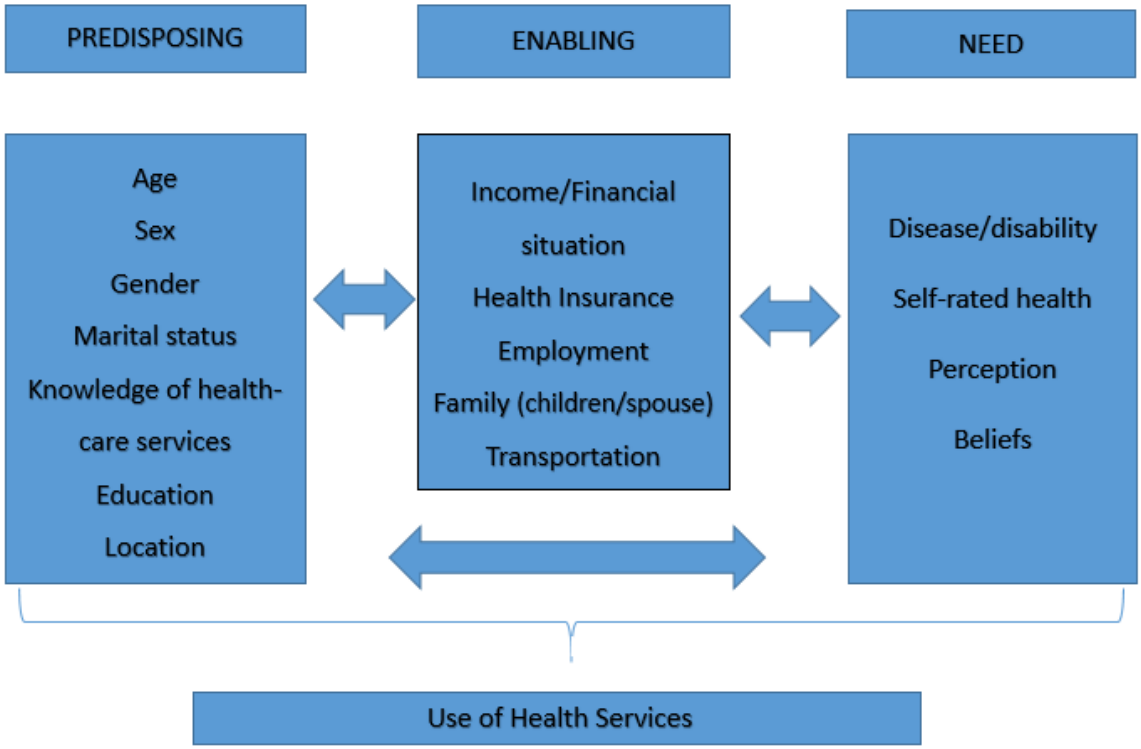
medicate, attend private health-care services instead or avoid using health-care services at all.

3.5 Summary

Throughout this chapter, predisposing, enabling and need factors have been explored according to Andersen's behavioural model; all of them may either facilitate or impede access to or/and use of health-care services. Some predisposing factors that influence access to health-care services may be difficult to change. Enabling factors may change depending on the life course of the individual and their deliberate efforts to attain health access and utilisation. For instance, a person may change his or her employment to another with greater health benefits. Need factors change over time, usually unintentionally; these may be a result of an accident or the ageing process itself, or of childhood illnesses.

The predisposing, enabling and need factors interact in many ways (e.g. enabling with predisposing or enabling with other enabling factors). Figure 2 shows the components that are researched in this thesis; some are only present in the quantitative or qualitative study. They have been adapted according to Andersen's behavioural model, and were chosen based on the available data in the MHAS dataset, the research questions and the relevant literature.

Figure 2. Individual determinants of health according to Andersen's behavioural model. (Adaptation)



Source: Andersen and Newman (1973:107). With author's adaptations.

The global literature on the access and utilisation of health-care services for older adults has been used to help understand the factors that are used in this study. The selection of literature was focused on older women, especially in developing countries; there was little research about older women in Mexico in particular, which indicates a literature gap. Literature from developed countries was included in order to complement and compare.

As has been demonstrated in this chapter, numerous authors in many countries have opted to use Andersen's behavioural model in researching access to and utilisation of health-care services, and it is widely used in ageing research. The literature has demonstrated various approaches to understanding access to and utilisation of health-care services; some identify capability to pay as a major determinant, while others point to behavioural factors such as help-seeking behaviour, or focus on socio-demographic issues such as age and education (Puentes-Markides, 1992). Moreover, determinants of access to and utilisation of health-care vary according to the type of service (Young *et al.,* 2001), country, national policies, organisation of health-care providers and other factors.

According to Andersen, in an equal society, need factors would be the strongest factors. The three components are explored in this research.

Throughout this chapter, possible barriers to accessing and utilising health-care services have been discussed. Barriers are experienced and overcome differently, depending on the population in context. If a health-care system provides universal access to health-care services, it is less likely that financial barriers will be present, in contrast to a privatised health-care system (Hossen and Westhues, 2011; Wendt *et al.,* 2012). This chapter has provided a broad perspective of global situations, experiences, policies and health-care systems. In the next chapter, specific literature about Mexico, its health access policies, changes to the health-care system, and specific factors such as location, family, employment, health insurance, sex, age and gender are explored in a narrower context.

Chapter 4: The health-care system and policy and social context in Mexico

4.1 Overview of the chapter

This chapter explains in detail the national health policies that determine access to health-care services for older adults in Mexico, which has several health-care providers (insurers) for different groups (e.g. workers, disadvantaged population). In Mexico, access (affiliation) is determined mainly by employment and derived rights or government initiatives (SPS).

In Mexico, universalisation of health-care services is a big challenge and a goal for the government. In recent years, many changes have been implemented in an effort to make health systems more equal, for instance the introduction of SPS and the creation of the ´General Law of Older Adults´ (H. Congreso del Estado de Baja California, 2017). The way these reforms and legislations influence access to and utilisation of health-care services is explored in this chapter.

Literature from INEGI and the National Council of Evaluation of the Social Development Policy (CONEVAL), as well as Mexican laws such as the General Law of Older Adults, are cited. These are among the most reliable Mexican sources of information on public policies.

4.2 How does the Mexican health-care system work?

It is relevant to this study to understand how the Mexican health-care system works and how its changes over the last few decades have affected older adults. Theoretically, all Mexican citizens have had the right to access health services by law since 1983-1984 (CONEVAL, 2014; IMSS *et al.,* 2016). Mexico has several health-care providers that could also be called insurers because they affiliate people: some through social security, some through direct payments and some because they are a disadvantaged group (this is explained below). Usually providers operate at a national level, with a presence in the 32 Mexican states (in coordination with states for funds) and the federal district, and have their own hospitals and health-care centres/clinics. People can only use a provider's services if they are affiliated to that provider. The Ministry of Health is a government body

that acts at a federal level; it is in charge of almost all the aspects of the health-care system, including providers, regulations, funding, policies, communications and other functions (Secretaria de Salud, 2019), and also delivers health-care in its own facilities (Barraza-Lloréns *et al., 2*002; Dantés *et al., 2*011). Each health-care provider has its own internal rules and provides services in its own facilities, although in 2017 a pilot programme interchanged patients for 100 treatments between IMSS and ISSSTE in some states (Rodriguez, 2017).

The main health-care providers in Mexico and the percentages of older adults (60 or older) affiliated to them by 2010 are: the Mexican Social Security Institute (IMSS) with 53.4%; the System of Social Protection in Health or Public Health Insurance Programme (SPS) with 28.1%; the State's Employees' Social Security and Social Services Institute (ISSSTE) with 14%; the Ministry of Navy Armed-Marine (SEMAR), the Ministry of National Defence (SEDENA) and Mexican Oil/Petroleum (a Mexican state-owned petroleum company) (PEMEX) with 2% taken together; and the private sector with 2.1%. There were another 2% of older adults affiliated to other providers in the private or public sector (INEGI, 2015). The most recent Mexican census took place in 2020 and there is no comparable data yet, but it is known that non-affiliation decreased notably between 2010 and 2020 and that women are disadvantaged when it comes to affiliation (33.8% of women are unaffiliated compared with 26.2% of men) (INEGI, 2020).

IMSS is the biggest institution of its kind in Latin America; it operates only in Mexico (IMSS, 2018). It is responsible for providing health-care services and pensions, mainly to workers in the private sector (e.g. manufacturing industry) (Pagán *et al.,* 2007). It is also available to those who wish to pay for the insurance as if it was a private service, costing MXN $3,900-$10,800 (about £156-£432) per year per person, depending on age and whether certain health requirements are met (see sub-section 3.2.1) (IMSS, 2019). The first Mexican health-care providers were IMSS and ISSSTE, created between 1943 and 1959 by the Ministry of Health (IMSS *et al.,* 2016). ISSSTE serves those who work for the government, SEMAR (Marine) serves the members of the Navy (Maurer, 2008), SEDENA serves the armed forces and PEMEX serves the employees of Mexico's state-owned oil company. In 2002-2003 the System of Social Protection in Health began operation (Parker *et al.,* 2015), aimed at the poor, older people and the rural population, among other sub-groups (Seguro

Popular, no date). Mexicans can choose to be insured though the SPS scheme if they are not insured by any other health-care provider (ibid) (see requirements in sub-section 4.2.4). The private health-care sector is formed by more than 48 companies providing health-care to the Mexican population, mainly by paying for services (e.g. consultations, medication, tests, scans, hospitalisations) at the time of use (see section 4.4).

The IMSS and ISSSTE also administrate social security for workers and their dependents. Among the benefits included in their coverage are: access to health-care; retirement, disability and widowhood pensions; life insurance; and loans. A worker's affiliation to the provider lasts as long as the work contract does, and once it ends the person and their dependents are unsubscribed (Quiminet, 2011). With IMSS, the right to health-care services is retained for eight weeks after termination of service (IMSS, 2019). It is responsibility of the next employer to affiliate the worker and the worker's responsibility to affiliate their dependents (IMSS, 2019; IMSS, 2017; Quiminet, 2011). Affiliation to IMSS or ISSSTE is not life-long for workers and their dependents unless the worker passes away while in affiliation to IMSS or ISSSTE or retires after working 500 (1973 rule) to 1,250 weeks (1997 rule), contributing with deducted payments from formal employment (IMSS, 2019). The 1997 rule made it harder to qualify for a retirement pension, because it does not depend only on age but also on the time spent contributing through social security payments, which takes much longer for younger generations. In Mexico, the retirement age varies but is usually around 60 to 65 years (Cámara de Diputados del H. Congreso de la Unión, 2014).

Deriving access to health-care rights for dependents is possible with both IMSS and ISSSTE; however, the requirements are different. For ISSSTE it is permitted to affiliate spouses and children, as well as other dependents such as parents, grandparents and great-grandparents if they are financially dependent on the worker and if they do not have any other affiliation (ISSSTE, 2015). For IMSS, it is not permitted to affiliate grandparents or great-grandparents, and the requirement for affiliating parents is that they should co-reside with the formal worker as well as being financially dependent on them (IMSS, 2016). This is to ensure that the dependents really need the derived rights to health-care services. Deriving rights with IMSS or ISSSTE does not cost the worker extra payments.

In terms of health-care coverage, it is not fully clear what is included and excluded (e.g. lists of medication available or diseases that will be treated). However, article 42 of the IMSS rules provides a short list of services not included in its coverage; among them are plastic surgery, some dental treatments such as endodontics and orthodontics, and some ocular surgeries (IMSS, 2019).

The Mexican health system has variants, barriers and complications for users, as well as inequalities (Wallace and Gutiérrez, 2005). Generally, the health-care provider to which older adults are affiliated is not their choice; it depends on the employer. Thus, patients with affiliation to IMSS, ISSSTE, PEMEX, Defence (SEDENA) or Marine (SEMAR) have to change GP every time they or their family members (if they are using derived rights for access) change job (OECD, 2017). This indicates an absence of choice in health-care insurance for Mexicans (Maurer, 2008), resulting in instability in using health-care services (this does not apply to SPS or private services).

4.2.1 Access to social security and health-care through employment in Mexico

The purpose of social security is to provide benefits in terms of economy and services in order to protect the population against contingencies, work and life-cycle related events such as maternity, paternity, disease, accidents, retirement and death (Barrientos, 2012; INEGI, 2007). This is possible due to contributions or payments to social security institutions (Barrientos, 2012).

As explained in the last section, In Mexico, like in many other countries, access to health-care services is mainly determined by participation in the formal labour market (Wong, 2007) and provided through social security institutions. However, employment is not the only route to health insurance; people can also obtain health-care coverage without being employed (privately). People's affiliation to a health-care provider may be a result of a formal job, status as a pensioner, dependence on a beneficiary, or taking part in a social programme (INEGI, 2012) such as 'Oportunidades/Prospera', which provides access to IMSS to citizens living in extreme poverty (IMSS, 2017).

According to the 2010 census, 54.9% of older adults (32.2% men and 12.8% women) worked after the age of 60 (INEGI, 2016). This does not mean that they had access to health-care services through their employment, since many older adults, especially

women, work in the informal market. Men have a higher participation in the formal workforce and better work positions than women (INEGI, 2015; Salgado-de Snyder and Wong, 2007). Moreover, many women (especially married) were discouraged from working. In 1970, only 17.6% of Mexican women participated in the workforce; from 1980 their participation increased, rising to 66.1% by 2015 (INEGI, 2007; INEGI, 2017). More recently, there has been research showing that having a spouse is related to low participation in the workforce for women (González-González and Wong, 2014). This may be because women are economically dependent on men, but also because they choose caregiving activities over working (Van *et al., 2*015); there is a tradition of caring for grandchildren as a support activity, as public nurseries and childcare are limited. Thus, family members take care of each other (ibid; Villegas *et al., 2*014). Pressure to provide care for the family in this way may affect women's labour opportunities and lead them to rely on others financially instead of being independent (ibid). Moreover, according to data from the National Survey on the Dynamics of Relationships in Households 2003 (ENDIREH), which focused on women aged 15 and older, 24.5% of women declared to have experienced 'economic violence' during their last relationship (INEGI 2012). The research classified actions such as a partner banning the woman from work during their relationship as falling within the 'economic violence' category (ibid); such actions cause the financial dependency of women (ibid). Age comparisons were not made in the study, since younger women may have shorter relationships and/or spend less time with their partners. In 2012, older women's access to health-care services was mainly through avenues not associated with their own work. Almost 50% of the older women affiliated to a health-care provider were affiliated through derived rights, mainly from children (INEGI, 2012).

4.2.2 Access to health-care services through children and/or spouse

As explained earlier, older adults have the option to affiliate to health-care services as a derived right of their child or spouse's formal job (Cámara de Diputados del H. Congreso de la Unión, 2014; IMSS, 2016; ISSSTE, 2015; Salgado-de Snyder and Wong, 2007; Wong *et al*., 2006); this applies not only to IMSS and ISSSTE but also to other health-care providers (SEMAR, 2008). Research using data from MHAS states that of the older adults with access to IMSS, 25% obtain access through children; with ISSSTE, 35% obtain access through children (Puig *et al.,* 2006).

The Mexican health-care system is primarily dedicated to serving workers and their dependents. Before 2001, there was a lack of health policies covering older women who had no partner or children. It was assumed that older women had lived according to gender roles such as carers or housewives, that they would remain with their partners all their lives, or/and that their child(ren) would provide them with access to health-care services if necessary; this meant that women who did not have a partner or children were vulnerable and generally excluded from health policies. However, since 2001, vulnerable people have been able to affiliate to SPS in their own right (SPS is covered in more detail in sub-section 4.2.4).

According to research, the proportion of older Mexican women living without a partner (e.g. divorced, widowed or separated) is higher (43.2%) than older men (18.4%) (Wong *et al.,* 2015; INEGI, 2017). This is not surprising, since women tend to marry men older than them, live longer, and tend to remain widowed or divorced at the end of their lives, in contrast to men who tend to look for a new younger partner (Salgado-de Snyder and Wong, 2007). These decisions put older women in a position of vulnerability in terms of economy and social support (ibid), but also in a position of dependency on support from their child(ren). Despite the growing number of women who obtain health-care in their own right, marriage, cohabitation and children still represent a significant source of insurance for many women (Karas *et al.,* 2009).

The Mexican regulations in terms of access to health-care services through marital status and living arrangements apply to both men and women, and they can both access health-care services on the same terms (e.g. in their own right). Generally, married older adults can access health-care services through a spouse working in the formal sector. If the person was married to a formal sector worker who has passed away, they can attain a widowhood pension from some health-care providers such as IMSS, ISSSTE, SEDENA or PEMEX, and continue with the access to health-care services they used to have (if they do not remarry or live with a new partner). If the bereaved partner was cohabitating but not married, they need to prove the cohabitation from six months for ISSSTE) or five years (for IMSS) before the day of the partner's death in order to attain the benefits (conditional that the late partner had no other spouse registered). However, if the deceased partner was still married to someone else (but separated/not legally divorced), the bereaved

cohabitant will not receive access to a pension or health-care services. Divorced people lose their affiliation to health-care services through a spouse when the ex-spouse informs the health-care provider about the divorce; however, those who do not divorce but live apart (separated from the marriage) can continue using the health-care services previously provided through their ex-spouse as long as they are not legally divorced (IMSS, 2019; ISSSTE, 2015; Ley General de Salud, 2015). Single women could be disadvantaged because they cannot obtain rights derived through marriage; the same applies to childless women, they cannot apply to derived rights through children. SPS can act as a safety net for these women because it provides basic health-care coverage.

There is evidence that having more children is associated with higher odds of being insured in Mexico (Diaz-Venegas *et al.,* 2017). This may be because participants can attain health-care insurance as a derived right from their child(ren), and both children and spouses can support them financially and give advice.

It is common for Mexican parents to rely on children as their main source of support (Noel-Miller and Tfaily, 2009). Among the older generations, women are frailer and poorer than men, and thus more dependent on assistance from their adult child(ren) (Gomes, 2007; Noel-Miller and Tfaily, 2009). Reliance on children in Mexico has increased by around 3% over the last 20 years (INEGI, 2012), which may be related to the economic crisis in Mexico. Moreover, Mexican society has values of gratitude and reciprocity, which can be explained as 'balancing of giving and receiving over time' (Breheny and Stephens, 2009:1300). It is possible that because women take the role of caregivers, they benefit more than men from children's support (see sub-section 3.3.4). This is consistent with international literature indicating that women are greater givers and receivers (Komter and Schans, 2008; Komter, 1996). The fact that older women rely on others may be a consequence of the accumulated disadvantages mentioned throughout this document, and their stronger relationships with their kin.

In Mexico, when an adult child and his/her spouse do not have enough resources, they have to decide whose mother will be supported. Research shows that in this case, the husband's mother is twice as likely as the wife's mother to receive financial support (Noel-Miller and Tfaily, 2009). This may be because men may have more economic power in their relationships than women.

4.2.3 Pension schemes

There are certain benefits for older adults through social security institutions. Parents can access a pension through a child if the child passes away while working in the formal sector and if the child had no spouse or child(ren) (among other requirements) (IMSS, 2018; ISSSTE, 2018). Spouses benefit more than parents. For instance, with IMSS, widowhood pensions are 90% of what the worker's salary was, while pensions for parents are 20% (IMSS, 2018); the figures are similar for ISSSTE. According to article 115 of the IMSS rules, it is possible to have the right to multiple IMSS pensions through various means (e.g. through being both a pensioner/worker and in receipt of derived rights); in this case, the provider will fix the pension based on the accumulated resources (ibid). Thus, it is possible to attain benefits through several means at the same time (e.g. spouse, children and own employment).

Pension schemes are relevant because a pension can provide independence and resources for accessing and using health-care services. Nevertheless, a pension may not be sufficient to cover all the necessities. A minority of older adults in Mexico (as in many developing countries) qualify for a retirement pension (Salgado-de Snyder and Wong, 2007). For instance, older adults working in the informal sector might work for as long as they can, then stop working in old age and depend on family members since they are not eligible for a pension. However, there are initiatives such as '60 y mas' ('60 and above') that give basic pensions to older adults (Espejel, 2019). More recently (2021), the government has instead proposed a universal pension for older adults over 68 years old (in some cases 65) in order to promote older people's wellbeing (Excelsior, 2021); this pension will be about $MXN 2,700 (about £100) every two months and is set almost to double by 2024 (ibid).

Table 1 Older adults in Mexico in receipt of retirement pensions in 2001

	Urban	Rural
Men aged over 60 years in receipt of pension	45%	16%
Women aged over 60 years in receipt of pension	26%	10%

Source: Salgado-de Snyder and Wong (2007:S442). An analysis of MHAS, 2001.

According to data from the Mexican government, only 30.6% of households containing an older adult are in receipt of a pension (any type of pension and any family member receiving it) (INEGI, 2017). Pensions in rural areas have traditionally been scarce compared with urban areas (Table 1); this could be because informal work is more common in rural than urban areas. It is documented that pensions for older adults in Mexico are provided mainly by IMSS (77.8%) and ISSSTE (14.7%), with 7.5% provided by other sources (ibid).

There has traditionally been a gender gap in regard to pension receipt, as shown in Table 1. In Mexico, the main reason older men attain a pension is retirement (after enough time in the workforce), while for older women it is due to widowhood (ANEI, 2014). Moreover, information from the MHAS affirms that 72% of older women receive economic support from children compared with 58% of older men (Salgado-de Snyder and Wong, 2007). Scarce pensions for older women compared with men may be one of the reasons why Mexican adult children tend to decide to support ageing mothers rather than fathers (Smith and Goldman, 2007); another reason could be that children develop stronger interpersonal and reciprocal relationships with their mothers than with their fathers because mothers take on more caring responsibilities early in the children's lives. This support from children is important, because Mexican women older than 60 depend on remittances rather than pensions, salaries or institutional support (Gomes, 2007), and are overrepresented among older adults with no income and savings.

It is possible that in recent times more women receive a pension (compared with the figures reported in Table 1). This is because over the years more women have been incorporated into the labour force. Moreover, social protection pensions have been introduced and strengthened since then. However, regulations to access pensions have

become more difficult to reach for younger generations in terms of the required time to reach a retirement pension after the 1997 rule (those who started working after 1997) (see section 4.2). A timeline of key reforms/initiatives affecting older women in Mexico has been included in Appendix B.

4.2.4 **The health-care reform: Seguro Popular (SPS)**

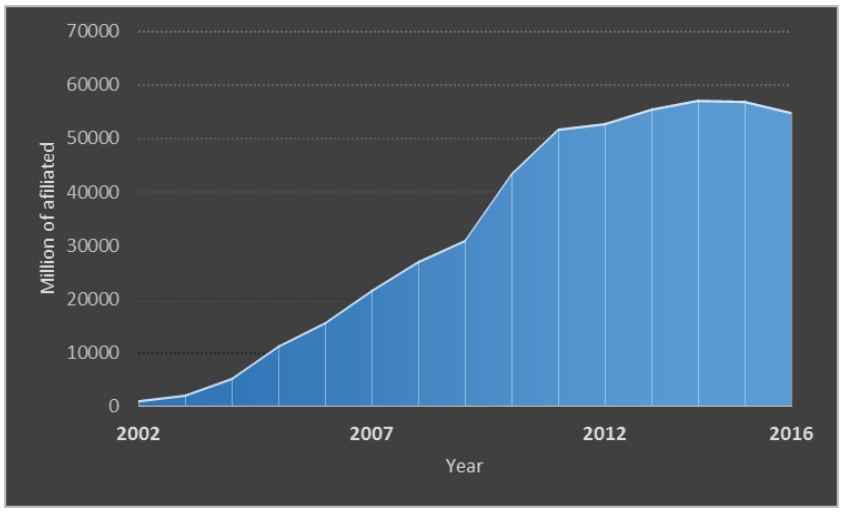
The Social Health Protection System (SPS) (2002-2003) was a health-care reform that aimed to provide health-care access to vulnerable populations such as older adults, rural and poorer people, no matter their work conditions and without modifying how the existing health-care providers worked. This is a social assistance programme (Seguro Popular, 2021), as opposed to IMSS and ISSSTE which are social security institutions. Social assistance often provides limited protection/benefits for a larger population (e.g. low income or informal workers) compared with social security which may provide better quality of services for formal employers (Barrientos, 2012). This is a result of the recent expansion of the social assistance in Latin America (e.g. SPS creation in 2000's) (ibid).

The Mexican health-care system has been characterised as fragmented, disconnected, inefficient, underfunded and with an incomplete coverage of the vulnerable population (Barraza-Lloréns *et al., 2*002; Maurer, 2008; OECD, 2017); these characteristics are common features in developing countries' health-care systems (Maurer, 2008). The aim of the SPS reform was to promote equality and achieve 'universalisation' of access to health-care by providing subsidised insurance to the uninsured population (ibid). One attractive feature of this public insurance (SPS) is that there are no requirements relating to work or derived rights necessary in order to affiliate. It provides access to health-care services free of cost at the time of use. The main requisites to affiliation are: lack of affiliation to any other health-care provider; and ability to make an annual payment that, according to economic status, varies from $0.00 to $11,378.00 (about £455.00) per family depending on their income (Maurer, 2008; Seguro Popular, no date). Older adults count as part of the family if they are 64 years or older, economically dependent and living with the family. However, they can enrol in SPS as their own family (with a spouse) or as an individual at half the family price (Parker *et al.,* 2015). SPS is free for disadvantaged groups (very low

income); the personnel working at SPS carry out an analysis and based on the household's situation, and determine the payable fees (Seguro Popular, no date).

The expectation for SPS was that by 2010 (Pagán *et al.,* 2007), the entire uninsured population would be covered. Almost two decades after the scheme was introduced, this is still not the case (INEGI, 2020); however, the number of affiliated people has increased significantly in recent years, as shown in Figure 3. In order to ascertain why the SPS has not insured the whole of the uncovered population, the barriers to accessing health-care providers are explored in the qualitative part of this research.

Figure 3. Millions of Mexicans affiliated to SPS



Data from INEGI (2017).

Older women and those living in rural areas have especially benefited from this initiative (INEGI, 2012; Parker *et al.,* 2015). The percentages of men and women affiliated to a health-care provider have become more equal since the introduction of SPS (Maurer, 2008). One study has shown that by 2012, there was no gender gap in affiliation to SPS: about 30% of men and 30% of women were affiliated to it (Parker *et al.,* 2015). A longitudinal study using MHAS data has found that older adults who had been uninsured in 2001 but had affiliated to SPS by 2012 tended to be female and married (Salinas, 2015). It has also been found that women insured with SPS tended to have lower levels of education (3.5 years) (ibid), while other studies have found that participants who were insured (with any health-care provider) tended to have higher levels of education and wealth (Pagán *et al.,* 2007). The differences may be due to the affiliation requirements of

SPS in comparison with other health-care providers, as well as the population that SPS aims to cover (e.g. unemployed, poor).

More than a decade after its implementation, several studies have been carried out evaluating the efficacy of the SPS programme; some have found effects such as an increase in the likelihood of being tested for blood pressure, diabetes, cholesterol or cervical cancer, or receiving a tetanus shot (Pagán *et al.,* 2007; Salinas, 2015). Other studies have also reported better utilisation of health services, particularly in rural areas (Parker *et al.,* 2015; Salinas, 2015). However, compared with other health-care providers, SPS has been evaluated lower in utilisation, quality and accessibility by its users (Table 2). Overall, the results from different studies suggest an increase in utilisation; however, in terms of the impact on health, the results have been varied (Parker *et al.,* 2015).

SPS serves over 50 million people in Mexico (Parker *et al.,* 2015) (Figure 3 above). There are certain indicators that can help evaluate the availability of health-care services, such as the number of nurses, doctors, beds and health-care centres per 1,000 affiliated people; this is related to availability, which impacts on the quality of services. For instance, SPS has increased the number of insured people dramatically in the last couple of decades, but it only totalled 0.629 outpatient clinics and 3.89 doctors in contact with patients per 1,000 affiliated people in 2008 (CONEVAL, 2014). By 2010, these numbers decreased to 0.391 and 2.5 respectively, with a negative impact on the utilisation of services (ibid). This demonstrates that the health-care provider to which an older adult is affiliated is relevant to their use of health-care services and that SPS may not be sufficient to treat the increasing numbers of affiliated people.

According to the literature, families have had to pay out-of-pocket for medical expenses, even when these expenses are supposed to be included in SPS coverage (CONEVAL, 2014). These situations may contribute to a lack of trust in the health-care system; they show that SPS health-care centres do not have enough resources to provide blood tests, treatment and medication for patients, even when it is included in the cover (ibid). In accordance with the Universal Catalogue of Health Services (CAUSES) published by the Ministry of Health, SPS covers about 250-287 interventions, including: 12 vaccines; 647 medications; clinical tests such as screening for diabetes and prostate, cervical and breast cancer; hypertension; and some dental services (CONEVAL, 2014; Pagan *et al.,* 2007; Seguro

Popular, no date). The catalogue is revised and updated every two years (Seguro Popular, no date). There are many common diseases not included in the coverage; for instance, according to SPS (2017), the coverage includes treatment for skin cancer but not if it is a melanoma (ibid). It includes surgery for benign tumours in the womb but not carcinogenic ones (ibid). The only available treatment for cancer was for neck cancer, however, cervical uterine cancer was added to the coverage in 2004 (Agren, 2020). Chemotherapy is not included (ibid). Treatment for a heart attack is not included (ibid). There is no list of what is not covered only a list of what is covered. Services such as diagnosis or treatment for leukaemia, multiple sclerosis, blindness and deafness (ibid) are not on the coverage list. Information about the coverage and the way it has been changing may be scarce, which diminishes the availability of services (CONEVAL, 2014). It is important to note that in Mexico, deaths among older adults occur mainly as a result of diabetes mellitus (17.1%), heart diseases (16.9%), cerebrovascular diseases (6.8%), respiratory tract diseases, pneumonia and liver diseases (INEGI, 2016).

More recently, due to changes in the government (transition of the presidency from a right party to a left party), the 'Institution for Health and Wellbeing' ('Instituto de Salud para el Bienestar' (INSABI)) has been created and taken place as a substitution for SPS. This happened in 2020 (after collecting and analysing all the data for this research). The big change of this social assistance programme is that there is no need for affiliation in order to receive health-care services (Seguro Popular, 2021). However, the name 'Seguro Popular' is still in use, it is still affiliating people and providing health-care services (ibid). Thus, this change can be viewed as a transition, change of name of a programme or an improvement of the programme with a change of name.

4.2.5 Multiple affiliation and quality of services

Given there are several health-care providers in Mexico with different affiliation requirements, coverage and quality, it is possible to obtain more than one affiliation and, with them, simultaneous access to different providers. This is mainly because the routes to access can be different (e.g. through a child, a spouse or one's own employment). There are health-care providers such as SPS, private health-care providers and some regional medical health-care centres that do not require people to be a formal worker/pensioner or dependent in order to gain affiliation; all of these increase the chance of having multiple

affiliations. In some cases multiple affiliation is legal and a good thing for an older adult, since it increases the possibility of receiving medical attention; in other cases it is illegal.

The Mexican government plans to eliminate multiple affiliations as a step towards the universalisation of health-care services (Government of Mexico, 2008; Health Ministry, 2018). According to data from the most recent census (2020), the percentage of unaffiliated Mexicans reduced by 7.6% between 2010 and 2020, and is now 26.2% throughout the country (INEGI, 2020). Since SPS requires users not to have any other affiliation (e.g. IMSS or ISSSTE) in order to access its health-care services (SPS, 2021), this implies that some older adults have to make a decision between health-care providers if they are considering accessing health-care through SPS. However, the regulations are different regarding multiple affiliations and can be contradictory; for instance, there is no requirement not to have other affiliations at IMSS. The benefit of having several affiliations to the same health-care provider is not access to health-care services but instead pensions and life insurance (IMSS, 2019). IMSS does not have any restriction in terms of affiliating workers or their family if they already have an affiliation to SPS or ISSSTE (ibid). To attain affiliation as a derived right with ISSSTE, a document is required that states the economic dependence on the worker and that the dependent does not have his/her own access to ISSSTE or any other similar provider (ISSSTE, no date).

Health-care services and their quality vary by provider (Naranjo and Gameren, 2015). According to data from the National Survey of Health and Nutrition (ENSANUT) (2006), the highest rated providers in terms of quality were PEMEX and SEDENA, followed by the private sector, and the worst rated were ISSSTE and SPS (Olaiz-Fernández *et al.,* 2006). Table 2 shows some aspects of quality and utilisation that may create inequalities; the table was created using information from a study conducted by CONEVAL, which used two (accessibility and acceptability) of the five dimensions of access (accessibility, availability, affordability, adequacy and acceptability) set out by Obrist (2007). In the same table, data from ENSANUT regarding out-of-pocket medical expenses is listed. A limitation is that these data came from non-gerontological studies, meaning participants of all ages were included. Moreover, the accessibility data could be unreflective of older adults who needed someone to take them to a hospital in an emergency, since that could increase the waiting time compared to younger people. In fact, there are only a few studies that have

evaluated the differences in the use of health-care services among the different available providers (Rivera-Hernandez and Galarraga, 2015). Table 2 allows a comparison of health-care providers for issues related to access and use of health-care services.

Table 2 Evaluation of Mexican health-care providers

Health-care providers	Accessibility; (average time it takes to the participant to get to the hospital in an emergency 2010) (CONEVAL, 2014).	Utilisation; percentage of participants who had health issues and were treated in 2010 (CONEVAL, 2014).	Acceptability; percentage of insured participants who rated 'very good' the quality of the place where they were hospitalised in 2012 (CONEVAL, 2014).	Out-of-pocket: Percentage of insured participants who preferred to get private medical attention (ENSANUT, 2012)
IMSS	35 Minutes	92.8%	23.2%	30.9%
ISSSTE	37 Minutes	94.4%	26.2%	28.4%
SPS	59 Minutes	87.2%	19%	31.1%
PEMEX	35 Minutes	96.6%	21.9%	27.2%
PRIVATE	Data not available	Data not available	68.1%	NA

Sources: CONEVAL 2014 and ENSANUT 2012.

Regarding accessibility, Table 2 shows that SPS users took the longest time by far to get to the hospital in an emergency. SPS was created to provide coverage to vulnerable populations such as those in rural areas; in contrast, ISSSTE provides health-care to government employees, who mainly work in urban areas may be more likely to have a car or means of travel, and can thus get to the hospital faster than disadvantaged groups. SPS had the lowest percentage of participants with health issues who were treated in 2010, as well as the lowest percentage of insured participants who rated its quality as very good. The percentage of insured participants in 2012 who preferred to use a private health-care provider, even though that meant spending out-of-pocket for medical expenses, was considerably high in general (around 30%) and even higher for SPS insured participants. This is interesting, given that SPS was created in order to benefit the most vulnerable populations in Mexico. The only data available from private health-care services relates to acceptability. It shows that patients were 68% satisfied with the quality of the health-care, which is quite high compared with the rest of the health-care providers, which had very

low percentages. However, all health-care providers had considerably high rates of utilisation.

4.3 Older population covered by the Mexican health-care system

Affiliation is the first step to access and use health-care services (CONEVAL, 2014). Compared with younger generations, older adults report a higher percentage of affiliation to health-care providers, and the proportion of older women equals or is slightly higher than men (Pagan *et al.,* 2007; Wong and Espinoza Palloni, 2007). This may be a result of the number of older women exceeding that of older men in Mexico, the health initiatives inclusive of older women, or the fact that women receive more support from children than men (see sub-section 4.2.2).

As explained in Chapter 1, almost 50% of older women are affiliated to a health-care provider through others (INEGI, 2012), even when they can have access in their own right (to SPS). This indicates a dependency in terms of accessing health-care and a preference for non-SPS services. Childless and single women may be at a disadvantage because they do not have the option of relying on others for health-care.

In terms of utilisation, older Mexican men may not be as familiar with health systems as older Mexican women, because women use these services more and with more frequency (Ortega and Armas*,* 2015; Salgado-de Snyder and Wong, 2007). The higher utilisation rates for women may be because they used the services when in their reproductive and caring roles (Salgado-de Snyder and Wong, 2007), but also because women experience more comorbidities (ibid) and as a consequence have more functional dependency and need for services (Zavala and Caballero*,* 2014).

The Mexican health-care system is still far from its aim of achieving universalisation of health-care services; some authors have criticised the universalisation plan, arguing that what the government has proposed is not exactly universalisation due to the low level of compromise from the state (Leal Fernández *et al.,* 2016). Deficiencies in quality and availability of services may cause people to turn to alternatives such as the private health sector.

4.4. Private sector: An alternative for health-care

The private sector, in this thesis, refers to health-care providers that do not receive funds from the government and where the patient pays in full or with an insurance quote for affiliation, treatments, medication and consultations. Sometimes banks or companies sell health insurance to customers and they receive services in private health-care centres or hospitals; this is still considered part of the private sector. This sector is very broad in Mexico; there is a high number of private services (at least 48 companies) and at least 3,172 hospitals (Dantés, *et al*., 2011). However, only a small percentage of the population have private health insurance (7.6%) (Casares, 2015). It has been used by people affiliated to IMSS, ISSSTE and other providers as an alternative, either to complement services or because of its faster service delivery (Maurer, 2008). For instance, the wait for outpatient care with a private health-care provider is about three times faster than IMSS (30 and 90 minutes respectively) (Dantés *et al., 2*011).

One concern about private health-care services is that they may lead to inequality due to prices. Uruguay and Ecuador implemented health-care reforms a bit later than Mexico, in 2007, with the aim of universalising access to health-care services; studies have found that in Uruguay, higher-income groups are more likely to be treated through private health-care (Gonzales and Triunfo, 2020; Quizhpe *et al.,* 2020). This may be expected, since private health-care can be costly, but Mexico has a large range of prices for private health-care, meaning that it could be considered affordable. Qualitative studies have shown that according to older women´s experiences, the public system often does not meet their needs (Makita, 2012). As a result of the variable quality of services from IMSS, ISSSTE, SPS and other health-care services provided by the Mexican government (Table 2), patients view the private sector as an alternative with the benefit of more options and a variable range of prices.

One initiative, started in 1997, is 'Farmacias Similares' (Similar Pharmacies). It is now a franchise that offers products and health-care services to the most vulnerable economic strata (Farmacias Similares, 2017), mainly in urban areas. Its establishments are pharmacies, or GP's offices attached to pharmacies, with one or more resident doctors offering diagnostics and treatment. Such services are quite popular in Mexico, Chile and Guatemala; in total, they have around 5,000 branches (ibid). 'Farmacias Similares' is best

known for offering discounts of about 75% off the regular price on medication, because it uses medicines whose patents have expired. Patients pay around £1 to be seen by a doctor (GP), compared with about £25 with other private health-care providers. They usually do not have to wait long, and can buy their medication at the same venue. The service also provides clinical analysis such as ultrasounds, x-rays, mammography and blood tests at extra costs (ibid). Thus, this is an option for people who do not have health coverage with IMSS, ISSSTE or any other health-care provider, do not want to wait long or travel far to be seen, and have the economic capacity to pay; it is more accessible than other health-care providers, with the catchphrase: 'the same but less costly' (Farmacias Similares, 2017:1). Nevertheless, since their facilities are pharmacies, they are not well enough equipped to treat a large number of patients at the same time, and lack the equipment to provide some treatments as well as specialist consultations.

There are also private hospitals in Mexico where, by paying a monthly rent, doctors can open their own consultation spaces. However, receiving medical attention from private providers requires out-of-pocket expenses; these are explained in more detail in the next section.

4.5 Out-of-pocket expenses in health-care

Out-of-pocket expenses usually refer to expenses that are not covered or reimbursed by the health-care provider, such as deductibles and medication. They are also referred to as payment with one's own money (Oxford, 2017). The Mexican health-care system involves high out-of-pocket expenses (Maurer, 2008). Mexican individuals have the highest out-of-pocket expense for health of the 38 member countries of the Organisation for Economic Co-operation and Development (OECD), this is linked to the inefficiency of its health system (OECD, 2017). According to Gutiérrez and team's research, carried out in Mexico, 'the willingness to make out-of-pocket payments for health care signifies a lack of effective access to pre-paid services.' (Gutiérrez *et al., 2*014:1). They measured effective access at the individual level, combining financial protection (household and health-care provider) and utilisation of health-care services (pre-paid) as required. In 2006, effective access had not yet been achieved by 65.9% of the population; this figure reduced to 48.49% by 2012 (ibid). These figures represent a big challenge for Mexico in terms of achieving universal coverage (ibid).

As many older adults are living in poverty, especially in rural areas, they often have to choose between paying bills and food or paying for medical expenses (Salinas *et al.,* 2010) which can lead to poor utilisation of health-care services. According to INEGI's data, the health expenses of households with at least one older adult are 50.7% higher than those with no older adults (INEGI, 2016). Among the aims of the SPS social assistance programme was to reduce out-of-pocket medical expenses, and a study has reported that there has been a reduction in out-of-pocket expenses for diabetes and hypertension in households with insurance from SPS (Salinas, 2015).

Some patients go to private health-care services (spending out-of-pocket) for common diseases (e.g. flu, cough) and only go to health-care providers such as SPS or IMSS (free at the point of use) for inpatient procedures or in case of severe illness because they cannot cover the cost using private services (CONEVAL, 2014). Another common reason why older adults pay out-of-pocket expenses for private services is that prescriptions are sometimes unavailable in the health-care provider to which they are affiliated (ibid), so they have to buy their prescription in a private pharmacy. Lack of medication is a well-known issue in the country, and the government and health-care providers have presented initiatives to tackle this problem (IMSS, 2019; Sanchez, 2015).

4.6 Other rules and initiatives benefiting older adults' access to and use of health-care services

It is important to note that the health-care providers' rules have changed and will continue to change over time, since Mexico is undergoing transformation, and significant changes in the structure of the National Health System (Mercedes *et al.,* 2013). Dozens of reforms and changes with impact on public health were made to the General Law of Health during the presidency of 2012-2018 (Cámara de Diputados del H. Congreso de la Unión, 2017; Leal Fernández *et al.,* 2016). Not all of them benefited the Mexican population, and researchers criticised some of them (Leal Fernández *et al.,* 2016), including the inclusive laws (by state) directed towards institutions and society in order to create initiatives for the wellbeing of older adults in general (Government of Mexico, 2008). States have endorsed the General Law of Older Adults using different names, such as the 'Law of the rights, protection and integration of older adults in Baja California State' (H. Congreso del Estado de Baja California, 2017; Ortega and Armas, 2015) and the 'Older People's Rights

Law' created in 2002 (Ortega and Armas, 2015). These laws have established substantial rights in terms of health, for instance free access to medication when a patient cannot afford it, access to free geriatric information, preferential access to health services, immediate hospital care in emergencies, nutritional and hygiene advice, and pensions for adults over 60 years old (Government of Mexico, 2008; H. Congreso del Estado de Baja California, 2017; Ley General del Adulto Mayor, 2015). Unfortunately, older adults may not know about this legislation; furthermore, the mere fact that these laws have been written and promoted does not guarantee them access to these benefits, as it depends on the variable availability of facilities and services. The legislation is informative about older adults' rights and encourages society to protect them; however, it is not necessarily being fulfilled. Moreover, some parts of the legislation are not clear enough; for instance, Baja California's legislation states that older adults might receive protection from their families, but it does not state what protection is against, or what the consequences are if the family does not protect the older adult (H. Congreso del Estado de Baja California, 2017).

The existence of health initiatives, whether from the government, charities or third parties, benefits older adults' health. There are hundreds of institutions, ministries and sub-ministries of health, and organisations of health resources in the country (Dorantes, 2015). An important initiative in health-care relevant to this study is the system of 'Consultorios Medicos Regionales' (Regional Medical Health-care Centres) (CMR). They are only located in the municipality of Arteaga, Coahuila (one of the 38 municipalities of Coahuila), which is one of the 32 states that constitute Mexico; thus, it only covers a very small proportion of Mexico. During the 2014-2017 administration, Mayor José de Jesús Duran Flores opened these small clinics in order to provide health-care in rural areas; because of their success, they have continued operating, with four open by 2016 (Pamanes, 2016). One of their purposes was to compensate for the absence of other health services in these areas (ibid). CMR provides basic health-care services 24 hours a day, all year round, to the population living in some of Arteaga's rural areas (ibid). The other 2,457 Mexican municipalities (INEGI, no date) may have their own initiatives promoting the health and well-being of the population in general and older adults specifically.

4.7 Summary

In this chapter, the particularities of the Mexican health-care system and the way it depends on formal employment have been explained. Since inequality is a significant theoretical focus for social science researchers studying ageing (Silverstein *et al.,* 2008), gender inequalities issues were explored in section 4.2; it was concluded that even though women are greater users of health-care services than men and have similar affiliation rates, inequalities may lead women to become dependent and face disadvantages in later life (Wong *et al.,* 2007). Policies, low levels of education and poor participation in the formal workforce and women taking positions of less power than men (e.g. in Chile) (Cardenas and Ramirez, 2018) caused economic disadvantages for women of whom almost 50% rely on others in order to access and use health-care services. The way that older women face dependency is explored later in the qualitative part of this research.

Statistics on topics such as derived rights, pensions, insured older adults, quality of services, location, utilisation and availability of health-care services have been explored in this chapter. Comparisons of the existing health-care providers have been made in order to ascertain which of them provide better services. SPS insures a large proportion of older women; as such, they do not need to rely on derived rights from others or work in the formal sector in order to access health-care services. However, SPS has deficiencies compared with other health-care providers in terms of utilisation and coverage, and results in the highest out-of-pocket expenses among all the providers.

Overall, the legislation in Mexico supports agreements favouring dependency on kin (Government of Mexico, 2008), but there are other ways to access and use health-care services. The next chapter explains in detail the methods used in this research to obtain information about older women interacting with the Mexican health-care system.

Chapter 5: Methodology

5.1 Overview of the chapter

Generally, this mixed-methods study has combined a quantitative secondary data analysis of the MHAS (2015), using descriptive analysis and logistic regression models, followed by a qualitative approach, using primary data from 20 interviews carried out in the North of Mexico. The research was intended to gain a deeper understanding of older Mexican women's access to and use of health-care services, potential dependency on support from a spouse and/or children to access and use health-care services, and their related feelings. Another important aim of this research was to investigate the barriers older women face in accessing and using health-care services.

This chapter aims to provide information on the relevant steps in the conduct of this study: the type and justification of the selection of methods, their strengths and drawbacks, the study population, the epistemology and the research questions. The chapter is divided into sections on the quantitative and qualitative strands, including reflections, limitations and ethical considerations.

5.2 Mixed-methods research

Mixed-methods research includes elements of both qualitative and quantitative research (Tashakkori, 2010). According to Creswell (2013), it can take the form of a combination of statistics and stories, and uses rigorous methods, with integrated results (incorporation of the analysis). It necessitates more than simply collecting these two types of data; it also involves the connection and integration of both sets of results (Tashakkori, 2010). Policymakers might expect meaningful results from analyses, and mixed-methods research provides the opportunity to take advantage of the strengths of each method in order to achieve such results (ibid). The appropriateness of the method depends on the research questions (Silverman, 2013). Some researchers claim that the two methods differ ontologically and epistemologically, while others argue that combining them creates a neutralising effect, using the advantages of each method to compensate for the deficiencies in the other and arrive at better results (ibid). This research follows the second way of thinking: one method (qualitative) compensates for the other (quantitative).

Triangulation (combining quantitative and qualitative methods to study the same phenomenon in order to increase the credibility of the research) (Hussein, 2015) was used in this study. Even though research on access to health services is led by quantitative research (Babitsch *et al.,* 2014), qualitative research can be of benefit in complementing and better understanding circumstances that may be ignored in specific surveys. For instance, the MHAS did not include enough data about barriers to accessing and using health-care services because the questionnaire was designed to obtain yes or no questions about a list of predetermined barriers: for instance, 'In the last two years, was there at least one instance when you had a serious health problem but you did not go to the doctor?' (MHAS, 2012:72; Appendix C). Those who answered yes were asked why they did not go to the doctor in that situation, with the following options: 'because you thought it would not help you to feel better; it would take a long time to get to the doctor; you did not have money; you did not want to bother others to bring you; or you were afraid of what doctors might find' (ibid). However, there could be many other reasons why participants may decide not to go to the doctor when they have a serious health problem, and not all of these reasons were captured in the fixed-choice options. The qualitative part of the study thus offered the possibility to complement this kind of data with interviews, which allowed participants to express themselves freely and enabled the researcher to create a list of barriers inductively from their answers.

Mixed-methods research was used because statistics on affiliation to health-care providers are not sufficient to explain how older women navigate health-care services. It was necessary to gather additional qualitative information and to consider indicators such as the availability, accessibility and quality of health-care services (CONEVAL, 2014). Research questions 1 and 2 were answered using both quantitative and qualitative analyses, while research question 3 was answered by the qualitative analysis only (see section 1.5). The analysis was conducted using a sequential explanatory design in which the qualitative analysis was dominant (Creswell, 2013) (see section 5.4).

In mixed-methods research it is important to identify if theory is going to be used and, if so, in accordance with which approach (quantitative or qualitative), as well as showing how it will provide an explanation or prediction about the relationships between variables. It may be included in the hypothesis to assist in designing the research proposal, or used as

a theoretical lens or perspective for raising questions (Creswell, 2013). In this research, life course perspective was used in both analyses. In the quantitative part of the study, it helped to select and study the variables influencing access to and utilisation of health-care services throughout participants' lives; it was used together with Andersen's behavioural model, which built the structure of the analysis. In the qualitative part, life course perspective was useful for informing the design of the data collection instrument, while in the analysis, it helped to explore older women's decisions in life and their experiences in relation to barriers, access and use of health-care services. Meanwhile, in the quantitative analysis, structured dependency theory helped to understand the relationships and causes of dependency for health-care that older women experience in Mexico, the way this relates to the health-care reform (SPS) and the way it has impacted on older women's access to and use of health-care services.

5.2.1 Study population

This research is focused on female participants because it makes the assumption that older Mexican women are disadvantaged compared to men in terms of the ways they gain access to health-care services, as has been pointed out in Chapters 3 and 4. The research questions explore older women's experiences, which are different from those of older men (see sub-section 3.2.3).

The age of the participants in this study was 60 years or older for both the quantitative and qualitative analyses. This age limit was defined because the Mexican law of rights for older adults considers adults to be 'older' from the age of 60 (Ley de Los Derechos de las Personas Adultas Mayores, 2016). Thus, for policy reasons, the government may consider 60 the threshold age, even though it may vary from state to state in the country. There are social programmes and benefits including older adults over the age of 60 such as '60 y mas' ('60 and above') (Espejel, 2019) and the National Institute for Older Adults' discount travel cards (INAPAM, 2016). Even though some of the programmes have been moving to 65 (Secretaria de Desarollo Social, 2016); this is because such a move may be largely related to the limited government budget available to support the programmes due to rapid population ageing and the growing number of older people, rather than to older adults' needs. Moreover, those younger than 60 may have different situations such as better health or better financial situations and working conditions; thus, they were not

considered for the study. Retirement age for women in Mexico is between 65 and 69, but this does not apply for many older women, either because they did not work in the formal workforce or because the laws for retirement age have changed and been applied differently over the years. As such, participants aged 60 could be retired and participants aged 69 or over could be working (see sub-section 4.2.3).

In the MHAS, age was defined according to the last birthday before the interview, meaning the number of full years that the participant had lived (MHAS, 2016); the same principle was applied to the participants in the qualitative analysis.

5.3 Epistemology and theoretical background to the research design

The way in which the researcher captured or interpreted reality in this research was based on two epistemological ideologies, positivism and interpretivism, each of which seem to be under tension from the other (Ryan, 2018). A research philosophy is related to the values and beliefs of the researcher guiding the study (ibid). Statistics are fundamental in positivist research, which is structured and objective, aiming to make generalisations and keep the researcher detached from the participants (Carson *et al.,* 2001) (e.g. quantitative research) when proving and disproving hypotheses (Ryan, 2018). Interpretivist research, on the other hand, recognises multiple realities; it is more personal and flexible, and aims to understand contexts (ibid). Qualitative research can be interpretivist, using observations, ideas and meanings (Noordin and Masrek, 2016), but this type of research has been criticised for its subjectivity (Zeinab *et al.,* 2014) and lack of scientific rigour, and because it is strongly subject to researcher bias. It is also criticised as insufficient; however, the same critique applies to quantitative research (Silverman, 2013). Nevertheless, there are also views recognising the subjectivity that the researcher brings to the research as a strength of the method (Braun and Clarke, 2013).

Methodological eclecticism refers to the freedom of choosing the methods to combine in order to answer research questions better (Tashakkori, 2010). This combination of statistics with stories, using rigorous methods with integrated results, offers the opportunity to gain knowledge at a macro level (implications for the health-care system) and micro level (implications at a family and personal level, personal experiences of ageing) (Victor, 2005). For this study, the researcher felt more inclined towards an

interpretivist approach at the beginning, but since the topic is health-care and there was data available that would better inform and enrich the research, mixed-methods was chosen. This was a challenge, and required the researcher to be open to working with both epistemological ideologies as a beginner. However, the fact that there were two clearly separated stages of research (quantitative and qualitative) made it more manageable. As a result, this research benefited from both ideologies (positivist and interpretivist), making it richer in content when answering the research questions. This is one of the advantages of mixed-methods research (see section 5.2).

5.4 Order of the research's design: Sequential Explanatory Design

This study used a sequential explanatory design. This type of approach is commonly used in research as methods that complement each other (Tashakkori, 2010). In this type of research, two phases are conducted, mostly separately. The quantitative part comes first, and later, the qualitative analysis helps to explain the quantitative results and explore themes that were not sufficiently covered in the first analysis (Creswell, 2013). The order of this methodology is explained by Creswell in Figure 4.

Figure 4. Sequential Explanatory Design

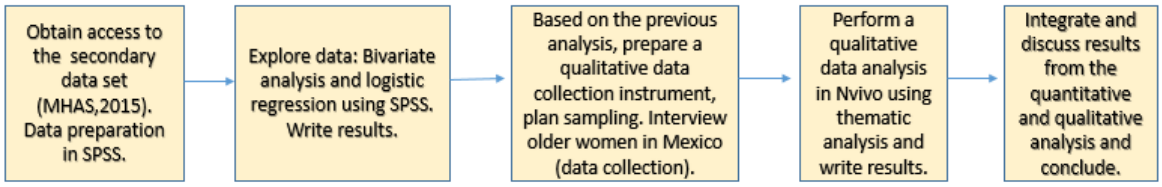
Source: Creswell (2003:209).

Creswell set out six strategies (orders) for conducting mixed-methods research; he considered Sequential Explanatory Design to be the most straightforward among them (Creswell, 2013). One of the advantages he mentioned was that the method has clearly separated stages and is easy to describe and report (ibid). It was used in this research because the order suited the research well; information had already been collected from the MHAS, and the secondary data analysis enabled the results to be used as a base to support the qualitative interview design. Thus, the second part (qualitative) was able to investigate and cover gaps in the first part (quantitative). For instance, information about the sources of affiliation to a health-care provider was limited in the MHAS study, but the qualitative analysis explored this topic further. Moreover, the more surprising results

obtained from the quantitative analysis were also explored in the qualitative part of the research.

This is a dominant-less-dominant study (Tashakkori, 1998). Even though the priority (the greater weight given to one part of a quan-qual analysis) is usually given to the quantitative part (Creswell, 2003), the dominant component in this research was given to the qualitative analysis because the majority of the research questions were addressed using the qualitative data. While the quantitative data provided necessary background information for the qualitative analysis, the qualitative results assisted in explain the quantitative results, as it is common in sequential explanatory design (ibid). An adapted research plan based on the sequential explanatory design (ibid) used in this research is shown in Figure 5.

Figure 5. Research design (sequential explanatory design)



Source: Author's research based on Creswell, 2003.

A weakness of sequential explanatory design is that the research process may be time-consuming (Creswell, 2003). However, because there was a suitable secondary dataset to explore the topics necessary for this research, there was no need to collect primary quantitative data, only qualitative data for the later analysis. A significant challenge in this sequential explanatory research was to integrate the results from both analyses, because of the different epistemologies explained in the last section. The results were individually reported in Chapters 7 and 8, and in Chapter 8 they were not mixed but compared (e.g. to find similarities and disparities in the results referring to the same topic), then integrated and discussed in relation to theories.

5.5 Methodology for addressing the research questions

As mentioned in Chapter 1, the research questions covered three thematic areas: dependency on children and spouses for access to and utilisation of health-care services; barriers in accessing and using health-care services; and the implications of SPS health reform for older women's access to health-care. The research questions are set out as follows:

1. How does having a spouse and/or child(ren) impact on older women's access to and use of health-care services in Mexico?

Access to health-care services can be gained through others (children or spouse) as a derived right, through one's own formal employment or through one's own right to SPS (basic coverage) or through social protection programmes. The aim of this question was to detect (in the quantitative analysis) the proportion of older women with derived rights to health-care services and to what extent family support is needed in Mexico in order to utilise health-care services, with particular focus on older women with limited family networks. The qualitative analysis further explored older women's perspectives and experiences of accessing and using health-care services, either as dependent or independent users. The two methods were used to compare older women in different circumstances (e.g. with or without children/spouse, living in rural or urban areas) in order to detect vulnerable groups.

2. What are the barriers older Mexican women face in gaining access to and using health-care services? And how can they overcome them?

Barriers can be experienced differently by each individual. The MHAS (2015) included variables relating to certain beliefs and circumstances that could act as barriers (see Appendix C, questions D15-D-16); these are used to answer this research question. However, it was mainly the qualitative analysis that provided detailed information about the barriers relating to older women's experiences with the Mexican health-care system and different providers, because it provided an opportunity to study this issue in-depth.

To answer this question, it was important to explore SPS and cases of women not affiliating to it, given that it does not require a dependence on others in order to obtain access to its services (see section 4.2). The aim of this question was also to research the awareness of

the participants (lack of knowledge barrier) about certain options they may have in relation to specific treatments, since not all health-care providers cover the same things.

3. What has been the experience of older women in Mexico of gaining access to and using health-care services since the introduction of SPS?

The health-care reform involved challenges in terms of coverage and policies, since it was designed as a step towards universalisation of health-care services in Mexico. The assumption about SPS was that there is a lack of information because it is a changing and relatively new system. This study intended to answer this question using only qualitative data, because it involved experiences, which were not possible to explore using a national survey such as MHAS, even though the statistics taken from MHAS were valuable as a background and support for the qualitative analysis. This question was addressed at the micro level using the life course perspective (Bengtson *et al.,* 2012). The analysis compared the different health-care providers (IMSS, ISSSTE, SPS and CMR) and users' characteristics (e.g. married, single, childless, rural or urban).

5.6 Quantitative analysis

Quantitative research involves formulating hypotheses and testing them numerically or statistically in an attempt to construct generalisations; it is very descriptive and focuses on facts (Noordin and Masrek, 2016). Quantitative research is efficient, which makes it easier to control bias compared with qualitative research. However, it is criticised for being impersonal, for not hearing participants' voices and for providing only limited understanding (Creswell, 2003). In this study, quantitative research was used because it provided generalisable results and allowed the examination of predictor and outcome variables affecting health-care access and utilisation among specific groups of older Mexican women.

5.6.1 Secondary data

The use of secondary data is an advantage because it saves resources such as time and money (Johnson and Turner*, 2*003). It provides access to larger files containing national representative data that a single researcher would not be able to collect (e.g. MHAS is coordinated by a large team of researchers and institutions) and that are often not fully explored. It is characteristic of social science research, particularly social ageing studies

(Mroczek *et al.,* 2011). The use of this type of data has been increasing among scholars (ibid). This is an advantage, but at the same time, because the data have not been created exclusively for the purpose of the study, there may be information useful for the research that is not included in the secondary data-set or that cannot be used. This limitation is discussed in section 5.8.

Secondary data analysis was helpful in this mixed-methods research because it saved time and economic resources (Johnson and Turner*, 2*003). The MHAS is an excellent source of gerontological information from Mexico; most of the topics planned for the research were covered in the data. Using the MHAS as a secondary data source contributed to answering research questions 1 and 2. More about the MHAS is explained in the next sub-section.

5.6.2 Dataset: Mexican Health and Ageing Study (MHAS)

The MHAS is the most important Mexican longitudinal study with a full gerontology approach (e.g. exploring the ageing process exclusively and in a complete way). It aims to understand the health dynamics of older Mexicans and examine their ageing process (MHAS, 2015). It is a prospective study designed and managed by a professional and experienced team from prestigious universities such as the University of Texas (EUA) and institutions such as INEGI in Mexico (MHAS, 2021). The MHAS public release data are representative of the urban/rural Mexican population of 50 years and older and their spouses (MHAS, 2016). The MHAS has external validation; similar indicators have been found in other Mexican censuses and surveys (ibid). Moreover, it is comparable and harmonised with international studies such as the CHARLS study in China, the ELSA in England and the CLSA in Canada (MHAS, 2015).

The MHAS data was relevant for this research because it informs the future needs of fast-ageing societies such as Mexico (ibid) and provides excellent and detailed information on health-care services (Parker *et al.,* 2015). MHAS waves have been conducted in 2001, 2003, 2012, 2015 and 2018 with high response rates (e.g. 88.1% in 2012 with 18,465 interviews) (MHAS, 2021). Data for the fourth wave was used as the data source for this analysis, since it was the most recent data available at the time of the analysis (data from wave 2018 has subsequently become available (ibid)). The longitudinal approach was not suitable for the research because the objective of this study was to explain the current situation of older women. Moreover, it was planned that the life course perspective

aspects would be captured in the qualitative analysis, since the aim of research question 3 was to collect experiences, which are difficult to obtain from quantitative secondary data.

Manuals (for interviewers and coders), sample design, methodological documents and questionnaires are available for students and researchers; the data are available in SPSS format and can be downloaded from the MHAS website (http://www.mhasweb.org/Data.aspx) (MHAS, 2021). Most of the documents are available in English and Spanish; however, there are exceptions where a particular document may only be available in one language. This was not a limitation when conducting this study, because the researcher is fluent in both languages. The requirements to access data specified on the website were: setting up an account on the MHAS website; not trying to identify participants; and crediting the MHAS for the use of data (MHAS, 2016).

5.6.3 Sample size and variable selection

The MHAS data used for this analysis met four characteristics; the data included were taken from female participants of 60 years and older who answered the full interview personally (not through proxy interviews). Thus, from the 14,779 interviews, 5,342 met the criteria for this research (described in sub-section 5.2.1).

From the 895 original variables contained in the MHAS dataset, 67 variables were taken into account. Some variables were discarded (e.g. selection of services, financial support from children) after certain considerations about their relevance. The variables that most closely fitted the research aims were selected. Thus, the study used 52 variables; these were organised according to the themes that emerged from the literature following the structure of the Andersen behavioural model (Andersen and Newman, 1973) (Table 3).

Table 3 shows the list of variables used for this study and their values. The 52 selected variables were cross-tabulated with each other in order to perform bivariate analysis, to find relationships that could provide valuable information for answering the research questions, and to select the variables that were going to be used in the later logistic regression analysis. The independent variables were organised following Andersen's behavioural model: predisposing factors (education, age, locality size and marital status); enabling factors (children currently alive, current work activity, person who paid most of the out-of-pocket medical expenses, self-assessed financial situation); and need factors

(self-rated health and beliefs about using health-care services). The dependent variables were access to and utilisation of health-care services. Access was derived from question D1 from the MHAS questionnaire (see Appendix C), 'Do you have the right to medical attention in…' (IMSS, ISSSTE, SPS, PEMEX, Defence, Marine, private medical insurance and other), as well as other questions included in Appendix C such as: the way respondents attained their affiliation and if they had any confirmation of that; the possibilities of having more than one affiliation; and an exploration of job benefits in order to understand whether respondents had gained access through their own work (MHAS, 2015) (Table 3). Utilisation was defined as the participants having visited a doctor, medical personnel or pharmacy regarding their health during the year prior to the interview, as seen in question D8 (see Appendix C); number of outpatient procedures was also an indicator of utilisation.

Table 3 Variables used in the study

Classification		Variable			Values-measure
Dependent variables		Access to health-care services	Access to health services (for each of the health-care providers)		1: Yes, 2: No, 8: RF, 9: DK
			No affiliation to health-care services (confirmation)		1: Yes, she has no affiliation, 2: No, she does have access (missing), 8: RF, 9: DK
			Number of health-care providers to which the participant is affiliated (multiple affiliations)		Number from 1 to 4
			The way respondents access health-care services (providers)		1: Worker, Affiliated on her own or retired, 2: Spouse of insured, 3: Mother of insured, 4: Other reason, 5: DK or RA, 6: No affiliation
			Benefits participant has from her current primary job: IMSS, ISSSTE or private medical insurance		1: Yes, 2: No, 8: RF, 9: DK
		Utilisation	Last year: Respondent's number of consultations with a doctor or medical personnel		1: At least once, 2: None, 888: DK, 999: RF
			Last year: Respondent's number of outpatient procedures		1: At least one, 2: None, 8: RF, 9: DK
			Last year: Did respondent visit a pharmacist regarding her health?		1: Yes, 2: No, 8: RF, 9: DK
Independent variables: Andersen behavioural model	Predisposing factors	Demographics	Education		1: 0 years, 2: 1-5 years, 3: 6-8 years, 4: 9-21 years
			Age		1: 90+ years, 2: 80-89 years, 3: 70-79 years, 4: 60-69 years
			Locality size		1: Population = 100,000+, 2: Population = 15,000-99,999, 3: Population = 2,500-14,999, 4: Population < 2,500
			Marital status		1: Married, 2: Single, 3: Cohabitating, 4: Divorced, 5: Separated from a marriage, 6: Widowed from a marriage or cohabitation
	Enabling factors	Children	Number of child(ren) currently alive		1: 0 children, 2: 1-3 child(ren), 3: 4-6 children, 4: 7 or more children
		Employment	Current work activity		1: Working, 2: Looking for work or does not work, 3: RF or DK
			Reasons the respondent does not work (10 reasons)		0: Selected answer, 1: Not a selected answer and open responses for 'other reason'
			Reasons the respondent left her last job (14 reasons)		0: Not a selected answer, 1: Selected answer and open responses for 'other reason'
		Out-of-pocket medical expenses	Person who mainly paid the out-of-pocket medical expenses of the participant		1: Children, children-in-law and grandchildren, 2: Another person, 3: Respondent and/or spouse, 4: Did not have expenses, 6: RF or DK
		Economic	Self-assessed financial situation		1: Poor, 2: Fair, 3: Good, 4: Very good, 5: Excellent, 8: RF, 9: DK
	Need factors	Utilisation barriers	Economic	Reason for not visiting a doctor when having a serious health problem: Respondent did not have money	1: Yes, 2: No, 8: RF, 9: DK
			Beliefs	Last two years: Did respondent have a serious health problem but did not seek a doctor?	1: Yes, 2: No, 8: RF, 9: DK
				Reason for not visiting a doctor during a serious health problem: Respondent believed a doctor could not help	1: Yes, 2: No, 8: RF, 9: DK
				Reason for not visiting a doctor when having a serious health problem: Respondent believed it would take too long to get there	1: Yes, 2: No, 8: RF, 9: DK
				Reason for not visiting a doctor when having a serious health problem: Respondent did not want to bother anyone	1: Yes, 2: No, 8: RF, 9: DK
				Reason for not visiting a doctor when having a serious health problem: Respondent was afraid of possible diagnosis	1: Yes, 2: No, 8: RF, 9: DK
		Self-rated health	Self-rated health at the time of interview		1: Poor, 2: Fair, 3: Good, 4: Very good, 5: Excellent, 8: RF, 9: DK

Source: Author's analysis of the MHAS Dataset (2015). RF: the participant refused to answer. DK: the participant did not know.

5.6.4 Analysis

The analysis was conducted using SPSS version 24. Data were not weighted in SPSS by the researcher because as in most government-related surveys (Thomas *et al.,* 2005), MHAS has been adjusted for non-response factors and sampling errors (MHAS, 2019). The first part consisted of descriptive analyses of the variables; following this, a bivariate analysis was conducted using cross-tabulations in order to explore the relationships between pairs of variables. The bivariate analysis also partly contributed to answering research question 2 (What are the barriers older women face in accessing and using health-care services?). Cross-tabulation or contingency tables were constructed in order to examine the relationships between variables (Norris *et al., 2*012). Chi-square tests of independence were performed in order to establish statistical confidence in the analysis (Baker *et al.,* 1984). This test is used with frequency counts; it compares the frequencies for each category with the expected frequency distribution (Norris *et al., 2*012). The bigger the disparity, the bigger the value of the chi-square and the more findings found to be statistically significant (ibid). This analysis tested for violation of the mathematical foundations of chi-square, such as the percentage of expected cell counts less than 5 (ibid). Results where the p-value was greater than 0.05 were reported as not significant.

The second part of the quantitative analysis was conducted using a series of multiple logistic regression models (Norris *et al*., 2012). This method was selected because after carrying out bivariate analysis (cross-tabulations), it was necessary to consider more than three variables in order to detect the best pattern of predictors of access and utilisation of health-care services, since 'in real life, variables rarely act independently of each other' (ibid:309). The models were conducted in order to determine if the selected (based on the previous bivariate analysis and literature review) predisposing, enabling and need factors had any effect on access to health-care services (coded as 1 = has access though this provider, 0 = does not have access though this provider) through the three main health-care providers in Mexico: IMSS (models 1-3); ISSSTE (models 4-6); and SPS (models 7-9). The rest of the health-care providers were included in models 10-12, grouped older women with no affiliation to any health-care provider or insurance scheme: 'unafiliation'. As explained above, the health-care providers were not analysed individually because the number of cases was very small. The models were conducted following the same process;

the first only included predisposing factors (age and marital status), the second included predisposing and enabling factors (number of children currently alive and self-assessed financial situation), and the third incorporated predisposing, enabling and need factors (self-rated health) (Table 4). This was useful in determining the extent to which the independent variables impacted on the dependent variables (measuring the strength of need, enabling and predisposing factors respectively).

In the next phase of the logistic regression analysis, three models (13-15) were conducted using the same process in order to investigate the utilisation of health-care services (all providers). The models followed the same process, except for some variables that were added as enabling factors: the person who mostly paid for the out-of-pocket medical expenses, and access to IMSS, ISSSTE and SPS (Table 4). The first category of each group was chosen as the reference group.

Table 4 Plan for logistic regression models to answer research question 1

	Dependent variable	Model	Independent variables								
			Predisposing		Enabling						Need
1: Access	Access to health-care services IMSS	1	Age	Marital status							
		2	Age	Marital status	Children currently alive	Self-assessed financial situation					
		3	Age	Marital status	Children currently alive	Self-assessed financial situation					Self-rated health
	Access to health-care services ISSSTE	4	Age	Marital status							
		5	Age	Marital status	Children currently alive	Self-assessed financial situation					
		6	Age	Marital status	Children currently alive	Self-assessed financial situation					Self-rated health
	Access to health-care services SPS	7	Age	Marital status							
		8	Age	Marital status	Children currently alive	Self-assessed financial situation					
		9	Age	Marital status	Children currently alive	Self-assessed financial situation					Self-rated health
	Unafiliation to health-care services	10	Age	Marital status							
		11	Age	Marital status	Children currently alive	Self-assessed financial situation					
		12	Age	Marital status	Children currently alive	Self-assessed financial situation					Self-rated health
1: Utilisation	Last year: visit to a doctor or medical personnel	13	Age	Marital status							
		14	Age	Marital status	Children currently alive	Out-of-pocket medical expenses	Self-assessed financial situation	Access to IMSS	Access to ISSSTE	Access to SPS	
		15	Age	Marital status	Children currently alive	Out-of-pocket medical expenses	Self-assessed financial situation	Access to IMSS	Access to ISSSTE	Access to SPS	Self-rated health

Source: Author's analysis.

The logistic regression was first run with only predisposing factors, then with selected enabling factors added, and a third time with adjustment for selected need factors. In order to obtain a goodness of fit test statistic for the models, the Hosmer and Lemeshow test was utilised (Lemeshow and Hosmer, 1982). Oher approaches to testing the models would also have been a good fit with the data, such as the likelihood ratio instead of the chi-square statistic; however, some authors consider that it is not correct to use this (ibid). This is further explained in Chapter 6.

A multicollinearity check was included in all the models using SPSS; the independent variables in the logistic regression models were tested for multicollinearity using a

tolerance or VIF score, and none of them had concerning scores. Therefore, there was no multicollinearity problem with the independent variables meaning there was not a situation in which variables were 'very closely linearly related' (Field, 2018:1026). The results were written up and are reported in Chapter 6; as explained above, based on the results and the research questions that needed answering, the next analysis (qualitative) was planned. This is described in the next section.

5.7 Qualitative analysis

Qualitative methods are an approach to studying human behaviour (Cobb and Forbes, 2002). They give the researcher freedom to let the study unfold more naturally, and can provide detailed data, hear participants' voices, and understand and explore their experiences (Silverman, 2005) and natural environments (Orb *et al.,* 2001). They offer an in-depth view of phenomena, they help to evaluate social programmes and they provide detailed information to improve health policy (Cobb and Forbes, 2002). They are important because they 'permit us to explore diversities in cultural and personal beliefs, values, ideals, and experiences' (Luborsky and Rubinstein*,* 1995:2). Usually, the generalisability of qualitative research is limited because of the small number of participants (Creswell, 2003), but it is increasing in social science research, and this approach can lead to the generation of new theories (Noordin and Masrek, 2016) as well as helping to design or improve quantitative surveys. Generalisability was not a goal in the qualitative part of this research.

The qualitative part of the research aimed to contribute to answering research question 1 and 2 and to answer research question 3 in full (see section 1.5). This highly interpretive method (Creswell, 2003) allowed the researcher to obtain information and cover topics that the quantitative research did not, such as older women's points of view regarding their access to and utilisation of health-care services following the introduction of SPS, the barriers they faced and the strategies they implemented to overcome them, their experiences with existing health-care providers and the way they met their needs, and the way participants felt about the quality and cost of the services.

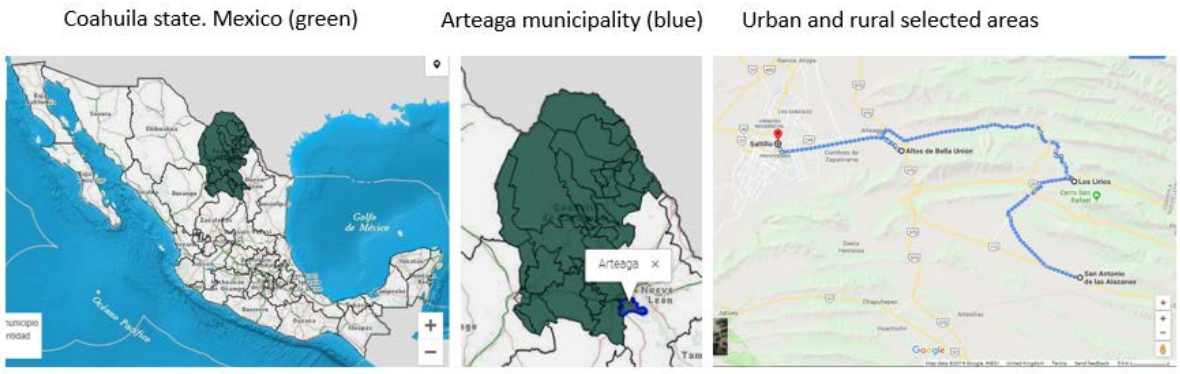
The qualitative data collection was conducted at the beginning of 2018, in the north of Mexico (Coahuila State); Coahuila was a place with which the researcher was familiar, and

was also the most suitable location in terms of budget and time considerations. Considering the available time designated for the data collection (three months), the resources and the characteristics of the region, three rural areas (San Antonio de las Alazanas, Altos de Bella Union and Los Lirios in the municipality of Arteaga, Coahuila) and one urban area (Saltillo City) were chosen in order to explore the differences between them (Figure 6 below). These areas provide a good reflection of northern Mexico's rural and urban areas. The sampling process used for this research is described in more detail in the next sub-section.

5.7.1 Maximum variation sampling

Once the 'target population' (older Mexican women from Coahuila, Mexico) was defined (Luborsky and Rubinstein, 1995), the sample size was determined (20 interviews). This number was small enough to allow participants to have a voice in the study (ibid) and to allow enough time to analyse each of them in depth. Location, in this part of the study, refers to the urban and rural areas of the country, in contrast to the quantitative part where it was divided into four locality sizes. Classifications of rural and urban areas vary depending on the country; according to the Mexican classification, 2,500 or less inhabitants in the area is considered rural while greater numbers are considered urban (INEGI, 2019). Some researchers consider the level of urbanisation to be more meaningful than the county size or geographic location (Litaker *et al.,* 2005). Thus, location was important when sampling, as it relates to the assumption that older adults living in urban areas may benefit more than those in rural areas; a higher level of urbanisation may lead to more health-care facilities and health promotion programmes being implemented, since there is more population to cover.

Figure 6. Maps of the sample for the qualitative analysis



Source: INEGI (2019); Google Maps, (2019).

The qualitative part of the study used maximum variation sampling (Coyne, 1997), a type of sampling in which the researcher seeks to obtain data from each of the included subgroups or characteristics of the interviewees (ibid) by looking for a variety of information. An advantage of this technique is that it ensures that each important characteristic or subgroup of the research is represented, for instance widowed, single, divorced, cohabitating and married older women. It tries to avoid randomness, since qualitative samples like this one are usually small (Marshall, 1996). Purposive sampling (Palinkas *et al.,* 2015) was also considered for this research; this would have enriched the data if women with particular health conditions such as cancer, or using a particular health-care service such as SPS, were selected. However, as the research considered geographic areas, marital status and existence of children as the main characteristics, it would have been too complicated to carry out purposive sampling, especially in rural areas.

Quota sampling (Luborsky and Rubinstein*,* 1995) was another possible option for this research, since a certain number of participants with each characteristic in terms of marital status, number of children and affiliation to a specific health-care provider could have been recruited in order to obtain heterogeneity. In maximum variation sampling, meanwhile, cases are selected in such a way that their combination provides as much heterogeneity as possible, taking into account the attributes important to the study (e.g. location) (Tashakkori, 1998). Thus, this sampling method was chosen for the analysis in

order to obtain information from older women representing each of the subgroups included in the research.

Financial status was not measured, because in Mexico, asking participants about their assets or earnings can cause them to worry about their safety or feel that they are being targeted for scams or robberies; thus, it is common not to ask for such information. For this reason, the researcher did not include questions relating to financial status in the interview, as it was important that the participants felt confident about talking. Nevertheless, some of the researcher's observations and the information that participants (voluntarily) shared during the interview gave an indication of their presumed socioeconomic status (Table 5).

Table 5 Sample distribution for the qualitative analysis

Marital status	Age group	Area	Access to:				Number of children	Pseudonym	Socioeconomic status (based on observations)
			IMSS	SPS	CMR	ISSSTE			
SINGLE	60-70	urban	Yes	No	No	No	0	Jessica	Medium
SINGLE	60-70	rural	Yes	No	No	No	0	Clara	Medium
DIVORCED	60-70	urban	Yes	Yes	No	No	4	Martina	Medium
WIDOWED	71-80	urban	No	Yes	No	No	3	Karina	Poor
WIDOWED	60-70	rural	Yes	Yes	No	No	4	Samantha	Medium
WIDOWED	71-80	rural	Yes	Yes	No	No	4	Angela	Medium
WIDOWED	60-70	rural	No	No	Yes	No	5	Rosa	Poor
WIDOWED	60-70	urban	Yes	No	No	No	5	Betty	Medium
WIDOWED	60-70	rural	No	No	Yes	No	6	Maria	Medium-high
WIDOWED	71-80	rural	No	No	No	No	6	Monica	Poor
WIDOWED	81-90	urban	Yes	No	No	No	8	Anita	Poor
WIDOWED	71-80	urban	Yes	No	No	No	8	Sabrina	Medium
WIDOWED	81-90	rural	Yes	No	Yes	Yes	14	Sofia	Medium
COHABITANT	60-70	urban	Yes	No	No	No	4	Laura	Medium
MARRIED	60-70	rural	Yes	No	No	No	1	Alexandra	Medium
MARRIED	60-70	urban	Yes	No	No	No	3	Daysi	Medium
MARRIED	60-70	urban	Yes	No	No	No	5	Patricia	Medium
MARRIED	60-70	urban	Yes	No	No	No	6	Juliana	Medium
MARRIED	60-70	rural	No	Yes	Yes	Yes	6	Karen	Medium
MARRIED	60-70	urban	Yes	No	No	No	7	Martha	Medium

Source: Author's analysis.

At first glance, Table 5 may suggest that only a few participants had access to SPS and that the sample was too small (5/20) to obtain relevant data about this provider. However, Table 5 only indicates participants' access to SPS at the time of the interview; more interviews included experience with SPS at some point in the participant's life (in some cases they were affiliated but had never used it; in others they had used it for some years in the past). Thus, in total, 12 of the 20 participants had experiences to share about SPS.

When collecting the data in Mexico, the researcher started recruiting for the interviews in urban areas by making contact with organisations where older adults gather, such as 'Sor Juana Ines de la Cruz' in the city centre of Saltillo, Coahuila. The leaders of the organisation authorised the conduct of some interviews at the venue. Looking for more variation in the sampling, the researcher contacted other participants in different areas of the city; these participants mentioned they could tell their friends and more interviews were arranged. In the rural areas, the researcher introduced herself to shop owners, asking if they knew of any potential participants; they referred some participants, and these participants referred other potential participants with the characteristics the researcher was looking for (e.g. single). Before the interviews, the researcher first introduced herself and shared a participant information sheet with the potential participant, who then took the time to read it and could ask the researcher questions before deciding to participate. Later, the researcher gave the participant the consent form and obtained written informed consent for the interview to start or to be arranged for a later date. The interviews lasted around 40 minutes, but they varied in duration depending on the participant's talkativeness.

5.7.2 Selection of data collection method

The method of collecting data for the qualitative analysis was interviewing. Structured, unstructured and semi-structured interviews were all considered. Structured interviews were not suitable because this study was looking for perspectives and experiences, and it was felt that participants would need a more open interview guide to expand on their answers. Structured interviews would have enabled a wider range of topics to be covered; however, interviewees may not have had the opportunity to expand on their answers and express their concerns or/and experiences. Unstructured interviews could possibly have allowed in-depth explorations of participants' experiences. However, they may also have collected data that was not necessary for the research, participants could have tired from the long interviews, and it could have increased the interviewing, transcription and translation times. Semi-structured interviews better ensured that the research questions would be covered; they provided the participants with confidence to talk more about the topics they identified with more and helped them to talk in depth about their life experiences (Parry *et al.,* 1999). Semi-structured interviews would also provide reliable and comparable qualitative data, allowing the researcher to take notes while interviewing

(Bacsu *et al.,* 2012). This type of interviewing had also been successful in the past when researching Mexican older women´s perspectives. The study conducted by Makita (2012) about the 'ageing experiences of older Mexican women' is a good example of the effectiveness of semi-structured interviews in understanding older women´s perspectives. Therefore, in-depth semi-structured interviews were selected, as it was felt that they would obtain adequate information and thus help to answer the research questions. The researcher was conscious that establishing rapport from the beginning was important for helping the participant to feel comfortable during the interview; this would benefit the relationship between the interviewer and participant, as well as the discursiveness of the interview (Robertson and Hale*,* 2011).

In addition to interviews, focus groups were also considered, because they have many advantages such as creating openness among respondents. Focus groups are a good alternative when the participants are older adults, because it encourages them to speak up (Kitzinger, 1995). Focus groups could have been used for this study, allowing discussions among each group of women (divorced, widowed, married, single, cohabitating). However, it would be difficult to gather older women together in specific geographic localities because they partake in different activities at different times. Finding an office or an adequate room, especially in rural areas, would also have been difficult; in addition, the data collection time might have been limited and the older women may not have wanted to share personal experiences with other participants for privacy reasons. Besides, interviews are more practical and personal and easier to arrange.

5.7.3 Analysis

For the analysis of the qualitative study, the researcher adopted a more personal and flexible approach (compared to the first quantitative analysis) in order to understand the context of the previous results (interpretivist ideology). It was found that the best way to do this was by using thematic analysis, an approach first named in the 1970s (Braun and Clarke, 2014; Merton, 1975), recently the authors' preference was to call the approach: reflexive thematic analysis (Braun and Clarke, 2019). Its aim is to identify and analyse patterns in qualitative data (Braun and Clarke, 2013). Thematic analysis was found to be suitable for this research due to its accessibility, reliance, flexibility and usability in analysing qualitative data (Braun and Clarke, 2006). It is recommended as a 'foundational

method for qualitative analysis' (ibid:78). By learning this method first, researchers will find it easier to learn skills for conducting other types of analysis in the future (ibid). Thematic analysis involves searching the interviews (the dataset) inductively and deductively in order to find repeated patterns and meaning that were considered at the beginning of the study by means of the research questions (ibid). One of the advantages of using thematic analysis in this project was that it is not a linear but a recursive process, with the researcher moving back and forwards within the data as needed (ibid).

Thematic analysis can be applied alongside a range of theories (theoretical independence) (Braun and Clarke, 2013). In this research, two theories were used as lenses in the data analysis process; life course perspective, in which events in women's lives were analysed in order to identify how decisions and changes in their lives (e.g. working, having children) may have led to dependency for access to and use of health-care services (micro level), and structured dependency theory, which was used to understand and analyse, at a macro level, the reasons why older women in Mexico need support and are dependent for access to health-care services.

The process followed the six phases of thematic analysis set out by Braun and Clarke (2006) and was carried out in the following order. First, the interviews were conducted in person over the course of a single stage that lasted for about three months. They were conducted in Spanish and audio-recorded. Seven days after an interview, the researcher would start transcribing it to a Word document; the reason for this time delay was to allow the participant time to withdraw their participation if they wished. The transcription process took several weeks, with the researcher listening to each interview about seven times to ensure familiarisation with the content (Braun and Clarke, 2013) and accuracy in the transcription. The detailed transcription consisted of the conversation between the interviewer and participant, including features such as emotions (laughing, crying, pitch shifts), pauses and interruptions. The interviewees' names were changed to names used in both English and Spanish (e.g. Maria). The interviews were not translated into English; the analysis was conducted in Spanish (from the Spanish transcripts) and written down in English, keeping the participants' quotations in Spanish until they were translated by the researcher into English during the writing-up phase (see section 5.8). This was to ensure that the analysis process stayed as close to the participants' original meanings as possible.

Along with the transcription, the researcher added observational field notes in English for each of the interviews in order to remember the participant and capture details that did not appear in the recorded interview (e.g. participant's appearance, neighbourhood, socioeconomic observations).

After finishing the transcriptions, all the word-processed files were imported into an NVivo 12 project and the researcher started coding (labelling the important features of the data), which is also part of the analytic process (Braun and Clarke, 2013). Nodes were mainly created inductively; however, some were created in advance in order to look for specific information (deductively). A file classification was created in N-Vivo 12 in order to keep in mind the characteristics of the participants and make it easier to identify and analyse the interviews. The researcher looked at each line of the transcript several times, finding, defining and re-defining codes (e.g. nodes (barriers) and sub-nodes (fear of travel, disability)). Following this, the 'searching for themes' 'generating (initial) themes' (Braun and Clarke, 2019) process started; a thematic order was created while analysing the information, allowing the possibility for other themes to be developed by the researcher. The coding/theme creation included more than just description; it also involved some interpretation (e.g. participants' feelings in regard to a situation, such as resignation, lack of trust or lack of decision power, were identified early). After reviewing, reflecting on, naming and renaming themes several times (e.g. multiple affiliation changed to maximisation), as well as defining the relationships between them, several thematic maps were created and discarded before arriving at the final versions shown in Figures 7 and 8 (Chapter 7). Following this, the writing-up process took place.

5.7.4 Reflexivity

Reflexivity is an important tool in research projects (Tashakkori, 2010), in fact, it has been considered vital and a good practice to interrogate/understand asumptions in qualitative research (Braun and Clarke, 2019). It enables self-awareness of the research and 'fosters a critical approach to epistemology' in the researcher (Fox and Murry, 2000:1161). If the researcher is successful in the process of recognising her own biases, they can be overcome to some extent.

The researcher shared several characteristics with the participants: she was female, a Mexican citizen who had lived in the north of Mexico for about 22 years, and a native

Spanish speaker. She also had previous experience interviewing older women in Mexico, which may have influenced this research. Some of these aspects gave the researcher an 'insider status' (Braun and Clarke, 2013). However, she was also a younger woman, living abroad, born in Mexico City (central Mexico), university-educated, bilingual and licenced to drive a car; this set of characteristics gave the researcher an outsider status (for instance, some participants in rural areas were surprised that the researcher was able to drive a car alone on the motorway and displayed curiosity about what it was like to live in England). Some of the above characteristics helped to facilitate rapport and interaction with the participants, while others could have caused suspicion. Two potential participants did not want to participate; the rest accepted. Establishing rapport and explaining the purposes of the research (participant information document) helped them to feel more confident about sharing their information.

Some of the characteristics mentioned in the last paragraph could also cause bias; for instance, the researcher's previous experience in interviewing older adults had been for the MHAS, where interviews had to be completed in the shortest possible time in order to avoid inconveniencing participants and increase response rates. Thus, the researcher had to reflect on the differences between quantitative and qualitative data collection and allow the participants to expand on their answers; that was difficult for the researcher. Also, the researcher faced challenges in conducting semi-structured interviews, as they required to think ahead (e.g. deciding on the possible questions that could be asked) in order to obtain rich data based on answers from previous interviews.

The communication between the researcher and the participants was clear and direct, except for older women in rural areas using the word 'single' to mean they were widowed (see section 5.8). Some did not want to share details about their jobs, income or family members supporting them financially; however, this is considered normal in the north of Mexico because of insecurity problems. The participants often omitted important and specific information such as the names of their children, their workplace, family earnings and assets, as sharing this information can put people at risk of scams, burglary or kidnapping; these risks have been common in recent years. The researcher kept an open mind and rapport with the interviewees and confirmed data when necessary in order to avoid bias to the greatest possible extent.

The relationship with the participants was short, since it was a one-time visit of no longer than an hour, and non-hierarchical, since the participants were viewed by the researcher as experts on the topic (their lives and experiences) and the researcher showed respect for their answers at all times.

5.8 Limitations of the research

In this section, the limitations of both parts of the study (quantitative and qualitative) are discussed. There were several limitations to consider while carrying out this research. These related to various aspects such as the methods chosen, the data collection process and the data analysis.

In the quantitative analysis, there were limitations relating to the secondary dataset, due to information that was unavailable or limited. For instance, one of the questions included in the MHAS interview asked who mostly paid for the participants' out-of-pocket medical expenses. However, both the participant and her spouse would be listed in the same answer, which did not allow any exploration of dependency on the spouse to cover out-of-pocket medical expenses.

Another limitation in the analysis of the secondary dataset was that it could not be analysed by state or city (see sub-section 5.6.2). For this research, it would have been useful to compare data by states or to use information from Coahuila State only. This would have given more precise statistics and helped to prevent bias (data may vary importantly from place to place within the same country). Information by state could also have been useful for the sampling of the qualitative study (e.g. detecting localities where there was no affiliated older women to SPS, IMSS or ISSSTE). The MHAS distribution of the sample included 470 cases in Coahuila out of 17,813 in the country (MHAS, 2019). Unfortunately, because the MHAS dataset could not be analysed by state results were generalised to a national level or in some cases by locality size (4), even though there were significant political, economic and cultural differences throughout the country. For instance, the northern (e.g. Baja California, Coahuila and Nuevo Leon) and central populations are wealthier, whereas the southern areas (e.g. Oaxaca, Guerrero and Chiapas) experience higher levels of poverty (Palacio-Mejía *et al.,* 2009); they also have different traditions and lifestyles (Makita, 2012). Among the 32 states, Coahuila has the

highest rate of divorce, separation and widowhood (35%) while Quintana Roo (10%) and Oaxaca (5%) have the lowest (INEGI, 2017). Two percent of the population in Coahuila is illiterate, compared to 13.3% in Oaxaca, and years of education are 9.9 on average in Coahuila but 7.5 in Oaxaca (ibid). It would have been useful to consider certain information for Coahuila State alone, such as number of children per women, health insurance status and any other relevant information; this would have made the results more comparable with the qualitative analysis.

In the qualitative analysis, it would have been interesting to compare the access to and utilisation of health-care services among diverse areas of the country (e.g. north and south). However, data collection for the qualitative part of the research would have been more expensive and time-consuming if travelling long distances within the country. Thus, only one state in the country was chosen (the state with which the researcher was most familiar: Coahuila, Mexico).

A limitation of the maximum variation sampling used in the qualitative part of the research was the many characteristics that could be considered when recruiting participants (e.g. with and without children, single, childless, widowed, divorced, cohabitating, from rural and urban areas, and affiliated to different health-care providers). Thus, priorities needed to be established (first urban-rural, then marital status and children, and third health-care provider if possible), which resulted in many participants being affiliated to IMSS, only a few to ISSSTE, and none to PEMEX or Marine. In fairness, it would have been very difficult to find participants affiliated to PEMEX or Marine, since the percentage of people affiliated to those providers is very small within the country (about 2.5%) (Table 6). The final sample was varied (Table 5). The researcher tried to obtain roughly the same number of interviews from each of the marital statuses and rural/urban areas, and to include childless women. However, this was not possible because some of the characteristics indicated by the participants prior to the interview turned out to be inaccurate during the interview (e.g. they said they were single but were actually widowed, or were interviewed in rural areas but lived in urban areas). This resulted in a larger number of widowed participants than participants in other groups.

In the qualitative part of the research, there were translation limitations. Interviews were conducted in Spanish because that was the main language of the researcher and the

participants. It was easier for the researcher to analyse the data in Spanish since it is her native tongue; however, the analysis (nodes, codes, notes, thematic maps and results) was written up in English. Thus, the process went as follows: when reading and interpreting the data, the researcher thought about it in Spanish, and once the idea of what was going to be written was clear, the code or memo was written in English. The only data that were translated were the extracts of the interviews used in the results chapter. The translation of quotations was carried out by the researcher, who is not a professional translator; thus, there was a possibility of errors in the translation. To minimise this limitation, the researcher asked a bilingual colleague to compare some quotations in English and Spanish and help with a more accurate translation (the identity of the participants was protected during this process).

5.9 Ethical considerations

'Ethics pertains to doing good and avoiding harm' (Orb *et al.,* 2001). This thesis placed importance on the appropriate principles for conducting ethical research at each stage of the research (ibid).

After reading information from several Mexican institutions, it was found that there was no requirement to obtain ethical approval from a Mexican institution if the research was not carried out by that specific institution. There are Mexico-wide regulations for biological and health studies carried out with humans. However, social sciences are not considered within these regulations. However, only the full consent of participants is compulsory for any study carried out in the country.

An ethical application form of the University of Southampton was completed separately for both types of analysis, and the researcher was informed of the ethics policy statement of the University (University of Southampton, 2017). For the quantitative analysis, ethical approval for secondary data analysis at the University of Southampton was granted on the 19th of December 2016 (see Appendix D). Moreover, the MHAS has been approved by the Institutional Review Boards of the ethics committees at the University of Texas Medical Branch in the USA, the INEGI, and the National Institute of Public Health in Mexico (INSP). The MHAS data are for public use; they have been de-identified, maintaining the anonymity of the participants.

Ethical approval for the qualitative study was granted on the 29th of January 2018 (see Appendix E). In this part of the study there was a need for credibility, especially since the research was being planned in a foreign institution that the potential participants did not know. Credibility was achieved by providing clear information (e.g. the participant information sheet and the availability to answer any questions) (Robertson and Hale, 2011). When collecting the data in Mexico, all potential participants were given a copy of the participant information sheet; they had enough time to read it and ask the researcher questions before deciding whether they would participate. There were two potential participants who decided not to participate; they were not asked why, only thanked for reading the information and for their time in one case (only one of them read the participant information sheet). The interviews started after the researcher had obtained written informed consent. All the participants were thanked verbally and gifted with a set of toiletries worth about MXN $150.00 (£6). The interview guide is included in Appendix F.

In order to practise good ethics while conducting the interview, the researcher prepared herself with an interview guide listing the topics to cover, and made sure that the participants were happy to participate and understood what the study was about. During the interviews, the researcher avoided talking about certain topics if the participants requested it. For instance, a participant who had recently been widowed stated at the beginning of the interview that she did not want to talk about her late husband; thus, the researcher avoided talking about him even though this information would have enriched the interview (e.g. pension, derived rights).

5.10 Summary

This chapter has explained the epistemology and general structure of this mixed-methods research. It has set out the order of the research (sequential explanatory), the dataset used (MHAS), the variables included in the study, the type of statistical analysis carried out (bivariate and logistic regression analyses), and the software used (SPSS version 24). It has also explained the data collection method for the qualitative study (individual semi-structured interviews), the sampling process (maximum variation), the transcription and analysis (thematic analysis), the software used for this (N-Vivo 12), reflexivity, ethical issues, and the limitations of the research. A timeline of the research is included in Appendix G. The results are written up separately in the following two chapters.

Chapter 6: Results from the quantitative secondary analysis

6.1 Overview of the chapter

The results presented in this chapter were obtained from analyses of the fourth wave of the nationally representative MHAS dataset, using data from women aged 60 and older (see section 5.6). The presentation of the results follow the Andersen's behavioural model of health-care utilisation (see section 2.7). The results pertain to access and utilisation of health-care services and are organised by predisposing, enabling and need factors, which make up the first part of the chapter (descriptive and bivariate results). The second part reports results from a multivariate analysis using logistic regression methods. The analysis was conducted according to the plan set out in sub-section 5.6.4.

6.2 Access to and utilisation of health-care services

Access was measured by the direct questions to participants in MHAS about whether they had the right to medical attention to any of the health-care providers (insurers) available and the way they were enrolled (e.g. own work or derived right) (see Appendix C). Utilisation was measured by a question to participants about whether they had used outpatient services or visited the medic or pharmacist over a certain period of time (see sub-section 6.2.5).

The dependent variables for this study were access and utilisation of health-care services, while the independent variables were determinants of access and use. Table 6 shows the frequency distribution of the variables used to assess the predisposing, enabling and need factors; it will be discussed further on in this chapter.

Table 6 Variables, sample size and percentages

Classification	Factor	Measures	Percentage	Sample size
Predisposing	Age	60-69	51.7%	2764
		70-79	34.3%	1834
		80-89	12.2%	652
		90+	1.7%	92
	Marital status	Single	6.4%	341
		Married	47.0%	2513
		Cohabitating	3.0%	161
		Divorced	2.9%	157
		Separated from a marriage	7.9%	422
		Widowed	32.7%	1748
	Education	0 years	21.6%	1146
		1-5 years	34.6%	1841
		6-8 years	25.0%	1328
		9-21 years	18.8%	999
	Locality size	Population = <2,500 (rural)	16.8%	899
		Population = 2,500 to 14,999	9.0%	482
		Population = 15,000 to 99,999	14.7%	783
		Population = 100,000 +	59.5%	3178
Enabling	Children currently alive	Childless	4.3%	228
		1-2 children	16.0%	857
		3-4 children	30.2%	1611
		5-6 children	22.3%	1191
		7-9 children	19.7%	1053
		10 children or more	7.5%	398
	Currently working	Yes	17.7%	944
		No	81.7%	4363
	Person who paid for out-of-pocket medical expenses	Children, children-in-law and grandchildren	23.4%	1252
		Another person	0.8%	43
		Respondent and/or spouse	40.1%	2140
		Did not have expenses	35.6%	1903
	Self-assessed financial situation	Poor	10.8%	577
		Fair	65.3%	3488
		Good	21.4%	1144
		Very good	1.4%	74
		Excellent	0.8%	45
Need	Self-rated health	Poor	18.4%	980
		Fair	55.1%	2943
		Good	22.7%	1214
		Very good	2.1%	113
		Excellent	1.7%	90

Source: Author's analysis of MHAS wave 4. (Note: the percentages for each variable do not always total 100% because of respondents who did not respond or did not know the answer).

6.2.1 Access to health-care providers

Information was collected regarding whether the study participants had access to the six main health-care providers in Mexico: IMSS; ISSSTE; SPS; PEMEX-Defence-Marine (the last three providers are grouped as one for this analysis); private health-care providers; or

other unspecified health-care providers. Further detail about these health-care providers was presented in section 4.2. Table 7 shows that IMSS had the highest number of affiliated women at 51.3%, followed by SPS (32.1%) and ISSSTE (18.7%). These three health-care providers match those indicated by the literature as the providers that insure most older people (INEGI, 2020). However, their proportions of insured older people are higher in this study than in the literature (see section 4.3). Only a minority of study participants had access to PEMEX-Defence-Marine (2.5%), private medical insurance (2%) or other unspecified health-care providers (1.3%). For this reason, these were not considered in the logistic regression analysis but they were included in models 10, 11 and 12. The percentage of private medical insurance was much lower than that reported in the literature (7.6%) (Casares, 2015); however, Casares' study did not look at older women in particular. As explained in section 4.2, some health-care providers are exclusive to employers of certain governmental institutions, and furthermore, participants may have had access to several health-care providers at the same time (multiple affiliations).

There were 379 participants (7.1%) who declared that they did not have access to a health-care provider. Cross-tabulation results showed a slightly higher percentage of childless women without access (unaffiliated) to a health-care provider (11%) compared with those who had children; for instance, women with 5-6 children had the lowest percentages of non-affiliation (6%) (Table 13).

Table 7 The way respondents gained access to health-care providers

	Health-care provider	Reason for affiliation
IMSS	51.3% Affiliated	Worker, affiliated in her own right or retired 23%
		Spouse of insured 47.9%
		Mother of insured 25.2%
		Other reason 3.9%
	48.7% Not affiliated	
ISSSTE	18.7% Affiliated	Worker, affiliated in her own right or retired 30.7%
		Spouse of insured 23.8%
		Mother of insured 38%
		Other reason 7.5%
	81.3% Not affiliated	
SPS	32.1% Affiliated	Affiliated in her own right 91.1%
		Spouse of insured 2.6%
		Mother of insured 2.9%
		Other reason 3.4%
	67.9% Not affiliated	
PEMEX, Defence or Marine	2.5% Affiliated	Worker, affiliated in her own right or retired 8.1%
		Spouse of insured 49.3%
		Mother of insured 39.7%
		Other reason 2.9%
	97.5% Not affiliated	
Private	2% Affiliated	Worker, affiliated in her own right or retired 55.2%
		Spouse of insured 21.9%
		Mother of insured 14.3%
		Other reason 8.6%
	98% Not affiliated	
Other	1.3% Affiliated	Worker, affiliated in her own right or retired 43.5%
		Spouse of insured 21.7%
		Mother of insured 21.7%
		Other reason 13%
	98.7% Not affiliated	

Source: Author's analysis of MHAS wave 4. Percentages total 100% by health-care provider (affiliated/not affiliated) and 100% by reasons for affiliation to each health-care provider. The table includes those who had more than one affiliation and those who had no affiliation at all, which is why the sum of all health-care provider percentages total 107.9% instead of 100%.

6.2.2 The way respondents gained affiliation to health-care providers

This sub-section analyses how women gained affiliation to each of the six health-care providers (Table 7). The health-care provider with the highest number of affiliated participants (51.3%) was IMSS. The majority of the participants with access to IMSS accessed it through a derived right from spouses or children (73.1%). Of the participants with access to ISSSTE (18.7%), 61.8% were affiliated through a derived right. The

percentages of participants affiliated to these two providers as a derived right through their children is very similar to those reported in section 4.2.2, which were also obtained using MHAS data (Puig *et al*., 2006). Only 32.1% of the participants were affiliated to SPS; this provider had a higher number by far of women who were affiliated in their own right (91.1%), compared with 5.5% affiliated through spouses and children. The high percentage of older women affiliated to SPS in their own right may be because SPS was created as a universal provider; it does not have a requirement for users to be formal sector workers or dependents in order to gain access to services, as is the case with other providers (e.g. IMSS and ISSSTE). Of the participants who had access to PEMEX, Defence or Marine, 89% were affiliated through derived rights. This could be because these institutions have predominantly male workers (e.g. only 20% of PEMEX employees were female in 2005-2007 (Ibáñes, 2019)). Among the participants with private health-care insurance, 55.2% had access in their own right and 36.2% through their spouse or children. Finally, of the participants affiliated to other unspecified health-care providers, 43.5% had access in their own right and 43.4% through derived rights.

Except for SPS, which is targeted towards vulnerable groups, a strong pattern of getting access to health-care providers through derived rights was observed.

Since there can be several ways to access health-care providers, this study aimed to find the 'main' one. A variable was created to group all health-care providers and study older women's dependency in accessing health-care services, eliminating double responses (participants with more than one affiliation through different means) and giving priority to answers indicating independent access to the health-care system (e.g. worker, affiliated in own right or retired) over those indicating dependency (e.g. derived rights from spouses or children). This new variable demonstrated that around 7% of the participants did not have access to health-care services, 47.2% had access to health-care services in their own right, 42.3% had access as a derived right (25.6% through their spouse only, 14.4% through their children only and 2.4% through both their children and spouse), and 3.4% had access for another reason, as shown in Table 8. This is because of SPS.

Table 8 Main reason respondent was affiliated to health-care providers

Main reason the participant was affiliated to health-care providers	Frequency	Percentage
Worker, affiliated on her own or retired	2518	47.1%
Spouse of insured	1364	25.5%
Mother of insured	768	14.4%
Mother and spouse of insured	127	2.4%
Other reason	180	3.4%
RF or DK	3	0.1%
No affiliation	381	7.1%

Source: Author's analysis of MHAS wave 4. RF: the participant refused to answer. DK: the participant did not know.

6.2.3 Multiple affiliations

Having access to more than one health-care provider in Mexico is possible; some providers allow it, but not SPS. Women in this study had access to up to four health-care providers at the same time through different means, for example having ISSSTE as a derived right through their child and SPS in their own right. As it is a requirement not to be affiliated to another health-care provider in order to access SPS, many participants were breaking the rule (Table 9). About 74% of the participants were only affiliated to one health-care provider, 14% were affiliated to two health-care providers, and less than 1% (0.5%) had three or four affiliations. IMSS was the most mentioned health-care provider among participants with multiple affiliations, which is not surprising, given that it is not against IMSS rules to be affiliated to other providers at the same time.

Table 9 Double affiliation

Health-Care Providers	Frequency	Percentages
IMSS-ISSSTE	329	6.1%
IMSS-SPS	257	4.8%
IMSS-PEMEX/Defence/Marine	33	0.6%
IMSS-Private Medical Insurance	44	0.8%
IMSS-Other	15	0.3%
ISSSTE-SPS	78	1.4%
ISSSTE-PEMEX/Defence/Marine	18	0.3%
ISSSTE-Private Medical Insurance	15	0.3%
ISSSTE-Other	7	0.1%
SPS-PEMEX/Defence/Marine	14	0.2%
SPS-Private Medical Insurance	5	0%
SPS-Other	11	0.2%
PEMEX/Defence/Marine-Private Medical Insurance	1	0%
PEMEX/Defence/Marine-Other	1	0%
Private Medical Insurance-Other	3	0%
Total	831	15%

Source: Author's analysis of MHAS wave 4. Information obtained from cross-tabulation shows that 15% of participants had double affiliation.

Table 9 shows that IMSS, ISSSTE and SPS had higher percentages of double-affiliating than the other health-care providers. This could be because, in proportion, they provide coverage to the majority of the population (Table 7 above).

6.2.4 Affiliation through employment

This section looks at currently working women in order to ascertain how many of them received IMSS, ISSSTE or private medical insurance as a benefit from their current primary job. A 17.7% of participants were working; however, only 2.5% had access to a health-care provider through their employment, and 15.5% did not receive health-care benefits (access to IMSS, ISSSTE or private medical insurance) through their job (Table 9). However, as mentioned in sub-section 6.2.1, 7.1% of participants were not insured at all. This indicates that at least 8.1% of working participants who were not receiving health benefits through their job had other means of insurance, such as derived rights, social programmes, purchased health-care insurance, SPS or affiliation from a job from which they had retired (under the IMSS 1973 law, which changed in 1997 (IMSS, 2019)) (see section 4.2).

Table 10 Access to health-care services though actual employment

<table>
<tr><td rowspan="4">Working 17.7%</td><td rowspan="3">2.5% Had access to health-care services through their job</td><td>1.4% had access to IMSS</td></tr>
<tr><td>0.8% had access to ISSSTE</td></tr>
<tr><td>0.3% had access to private health insurance</td></tr>
<tr><td>15.2% Did not have access to health-care services through their job</td><td></td></tr>
</table>

Source: Author's analysis of MHAS wave 4. Note: percentages 2.5% and 15.2% sum the 17.7% and 1.4%; the 0.8% and 0.3% sum the 2.5%.

6.2.5 Utilisation and its barriers

Three indicators were used to assess utilisation of health-care services. Table 11 shows the cross-tabulation between the utilisation variables and the three main health-care providers (IMSS, ISSSTE and SPS) in Mexico in order to detect possible underutilisation of health-care services. Other providers were not included because they had very low numbers of cases. The first indicator refers to the number of consultations with a doctor or medical personnel during the year prior to the interview; this was similar between the three health-care providers. The second indicator was the number of outpatient procedures the respondent had during the year before the interview; this was higher for users of ISSSTE, which could indicate the availability of outpatient services is higher with this provider. Finally, the third indicator was whether the participant had consulted a pharmacist regarding her health during the year before the interview. This indicator is key to detect out of pocket medical expenses and it shows those affiliated to SPS followed by IMSS had higher percentages of affiliated older women recurring to pharmacies for health-care which could be related to a weakness of these services (e.g. poor availability, poor quality). This will be investigated further in the qualitative analysis.

Table 11 *Indicators of utilisation: IMSS, ISSSTE and SPS*

		Participants affiliated to:		
		IMSS	ISSSTE	SPS
Last year: Respondent's number of visits to a doctor or medical personnel (Yes = at least once, No = 0)	Yes	89.3%***	89.1%**	85.7%
	No	10.7%***	10.9%**	14.3%
Last year: Respondent's number of outpatient procedures (Yes = 1-30 outpatient procedures, No = 0)	Yes	3.9%*	5.9%*	4.6%
	No	96.1%*	94.1%*	95.4%
Last year: Did respondent visit a pharmacist regarding her health	Yes	12%	9.6%**	13.7%*
	No	88%	90.4%**	86.3%*
Last 2 years: Did respondent have a serious health problem but not seek a doctor	Yes	7.9%***	8.90%	12.7%***
	No	92.1%***	91.1%	87.3%***
Notes:*p≤.05; **≤.01; ***p≤.001				

Source: Author's analysis of MHAS wave 4. Chi-square test statistics used. Significantly different between expected and observed value.

In regards to barriers, the variables indicating the reasons for not seeing a doctor even when participants thought they might have a serious health problem (also in Table 11), these were investigated and cross-tabulated with the predisposing, enabling and need factors. Thus, participants were asked if, during the two years prior to the interview, they had had a serious health problem but had not sought a doctor (see Appendix C). Participants who answered yes to that question (9.8%) were asked why they had not gone to the doctor even though they had needed to do so (as opposed to the information presented in Table 11 where participants may not have visited a doctor, pharmacist or outpatient clinic because they did not need to do so); here, multiple responses were allowed. Amongst the barriers they reported, the most common was financial reasons; more than half of the participants (53%) stated that they had not visited a doctor because they did not have money. Interestingly, this percentage was higher for women with children (29%) than for women without children (5.4%). Other barriers were related to beliefs; 31.7% of respondents believed that a doctor could not help them. This barrier in the Mexican context could be related to culture, in some areas of Mexico it may be common to consult with other people such as homeopath or folk healers regarding their health, in fact those questions were also asked to participants in the study. About 20% believed that it would take too long to get there, and 35.9% did not want to bother anyone (higher percentages of participants indicating these barriers were lived in larger urban areas). Finally, 28.9% were afraid of the possible diagnosis (with a higher percentage for women aged 60-69).

6.3 Predisposing factors

In the next sections (6.3-6.5), an analysis of the independent variables is presented following the structure of the Andersen behavioural model. The predisposing factors are age, marital status, locality size and education.

6.3.1 Age

Participants were between 60 and 100 years old at the time of the data collection. The mean age of the participants was 70 years. The majority of participants were in the age groups of 60-69 and 70-79 years old (86% combined). According to the literature, life expectancy at birth for women in Mexico is 79.5 years (World Life Expectancy, 2019). Thus, there were fewer participants of older ages. There were differences according to participants' age groups. Some interesting results were that that younger participants generally had more years of education than older participants. Older participants had more children, this can be related to the reduction of fertility (Appendix B). Younger women were involved in labour participation in higher percentages than older women, this is related to retirement age (see table 14). More interesting results related to age were found in the multivariate analysis (see section 6.6).

6.3.2 Marital status

As discussed in sub-section 3.2.4, marital status may influence access to health-care services. This variable was grouped into six categories (Table 12); it was found that about half of the women (45.8%) had a spouse at the time of the interview, while single (never married) women made up 6% of the participants. According to the literature, dependence on a spouse is one of the means by which women can obtain access to a health-care provider (see sub-section 4.2.2) (INEGI, 2012). Considering that single women did not have this option, they are very relevant in this study and their information is explored in-depth below.

Table 12 Relationships between marital status and education, work and insurance

	Single	Married	Divorced	Cohabitant	Separated from a marriage	Widowed
Participants with 9-21 years of education***	31.7%	20.7%	28%	12.4%	18.1%	13.6%
Working participants ***	28.2%	16.9%	29.3%	28.7%	21%	14.2%
Participants dedicated to household chores as a reason for not working***	34.4%	77.0%	42.3%	73.3%	46.8%	50.5%
Participants not working because they were retired***	38.5%	9.2%	32.4%	12.9%	21.9%	15.8%
Participants affiliated to a health-care provider in their own right***	82.8%	44.3%	64.3%	70.6%	55.1%	50.2%
Participants affiliated to a health-care provider through their spouse***	0.7%	38.2%	9.1%	13.3%	14.7%	22.8%
Participants affiliated to a health-care provider through their spouse and children***	0%	3.2%	0.7%	1.4%	0.8%	2.7%
Participants affiliated to a health-care provider through their children***	11.6%	11.7%	17.5%	9.1%	24.1%	20.1%
Notes:*p≤.05; **≤.01; ***p≤.001						

Source: Author's analysis of MHAS wave 4.

As can be seen in Table 12, a lower proportion of widowed and married participants were employed (14.2% and 16.9% respectively), compared with 29.3% of divorced women. This is important because they (the widowed and married participants) could have been supported by a spouse (derived rights and widowhood pension) and thus without any need to work. However, even though cohabitating participants could also have been receiving this kind of support, they had a higher percentages of being working.

A higher proportion of women who were married or cohabitating (77% and 73.3% respectively) identified their dedication to household chores as their reason for not working, compared with 34.4%, 42.3% and 46.8% respectively for those who were single, divorced or separated. This can indicate that male spouses support their partners financially while females dedicate to households chores as it is traditional in Mexican gender roles.

Married women represented the lowest percentage of women affiliated to health-care providers in their own right (44.3%); in comparison, 82% of single women had their own

right to provision. Moreover, the results indicate that married women had higher percentages of affiliation to a health-care provider as a derived right from their spouse (38.2%) or through both their spouse and children (3.2%) (double affiliation) than the rest of the participants (Table 12).

6.3.3 Locality size

About 17% of participants lived in rural areas, while 83.2% lived in urban areas (slightly lower than that reported by the INEGI (see sub-section 3.2.7); the MHAS aims to be representative of both the urban and rural Mexican population (MHAS, 2016)). The MHAS presents four categories for population size: less than 2,500; 2,500 to 14,999; 15,000 to 99,999; and 100,000 or more inhabitants.

Locality size was associated with participants' level of education; 84% of the participants living in dense areas (100,000+ inhabitants) had 9-21 years of education, compared with 3% of participants living in rural areas (<2,500 inhabitants). Regarding the number of children, a noteworthy pattern was found; the smaller the locality size, the more children the women had. Percentages of women with more than four children were higher in areas with less than 14,999 inhabitants.

The percentages of participants with private health insurance were generally low, decreasing from 2.8% in dense areas (>100,000 inhabitants) to 0% in rural areas (<2,500 inhabitants). This may be because of a lack of services in smaller locations, even though the private health sector was established before the SPS health reform (2002-2003).

6.3.4 Education

Education was measured as the number of years a participant had spent in formal schooling. Table 6 shows that 21.6% of the participants had zero years of education, 34.6% had 1-5 years, 25% had 6-8 years and 18.8% had 9-21 years. The mean was 4.88 years. This is important, because a lack of education may have a negative implication for women's opportunities to work formally over their life course. Nevertheless, education is not a requirement for many jobs. It was related to locality size (see previous section).

6.4 Enabling factors

The enabling factors included in this part of the analysis are: children currently alive; whether the participants were employed and, if unemployed, the reasons why; the reasons they left their last job; their self-assessed financial situation; and the person who paid most of their out-of-pocket medical expenses, if any.

6.4.1 Children currently alive

The number of currently alive children the participants had may have had an effect on whether they had access to health-care providers, as it may have been possible to access it through derived rights from children (see sub-section 4.2.2). The number of children ranged from none to 20 (one participant had 20 children) and was grouped into the six categories shown in Table 13. The responses included adopted children, as well as any other children the women had raised and considered their own, but only those who were still alive when the interview was conducted. The largest category of women (30.2%) had 3 or 4 children. The mean was 4.9 children, which may represent a high fertility generation, as Salgado-de-Synder and Wong have suggested (2007). Less than 5% of the participants were childless; those with 10 children or more constituted 7.5% of the sample. Since access to a health-care provider can be gained through children, childless women may have been in a disadvantaged position in terms of accessing a health-care provider (except SPS). Moreover, childless single women (2.3%) did not have the option of derived rights either through a spouse or children.

Table 13 Relationships between number of children currently alive and economic status, employment, access and utilisation of health-care services

		Number of children					
		0	1-2	3-4	5-6	7-9	10+
Economic	Poor self-reported financial situation***	15.4 %	11.4 %	8.8%	11.0 %	12.5 %	10.8 %
Employment	Did not work because they were dedicated to household chores***	41.9 %	53.4 %	65.1 %	65.1 %	64.9 %	63.8 %
	Not working because they were retired***	30.8 %	28.2 %	17.6 %	9.7%	6.7%	6.3%
	Currently working***	24.6 %	23.6 %	19.8 %	16.6 %	13.5 %	8.3%
Access	Uninsured***	11%	7.5%	6.0%	6.7%	7.9%	8.3%
	Affiliated to a health-care provider in their own right***	72.4 %	56.6 %	44.4 %	42.4 %	44.3 %	45.6 %
	Affiliated through their children***	NA	8.6%	13.7 %	16.6 %	19.9 %	16.1 %
Utilisation	Zero number of visits to a doctor or medical personnel during the year prior to the interview *	21.1 %	13.5 %	13.6 %	13.3 %	13.6 %	13.1 %
Notes:*p≤.05; **≤.01; ***p≤.001							

Source: Author's analysis of MHAS wave 4.

The number of children was significantly associated with the financial status of the participants. Table 13 shows that the proportion of participants who categorised themselves as financially poor was slightly higher among those who were childless (15.4%) compared with those with at least one child. The number of children was also associated with employment; the proportion of participants who did not work because of dedication to household chores was generally high. It was slightly lower among childless women (41.9%) and those with one or two children (53.4%) than among women with more children (over 63%). This could imply that the higher the number of children, the more chores, and this influenced women's decision not to work; this is in line with the literature (Van *et al., 2*015). However, the ages of the children and whether or not they lived with the participant were not taken into account. Also, the proportion of women who were retired decreased as the number of children increased (Table 13). This may be because it can be harder for women to maintain a formal job over a certain amount of years (and obtain a retirement pension) when they have more children (see section 4.2).

When it comes to access to health-care services, the proportion of participants affiliated to a health-care provider in their own right was higher among those who had no children

(72.4%). Also, a slightly higher percentage of childless women who did not have access (were not affiliated) to a health-care provider (11%) compared with the rest of the participants (Table 13). As expected, the number of participants affiliated to a health-care provider through their children increased with the number of children: from 9.5% (1 or 2 children) to 21.9% (7-9 children). This information supports the hypothesis that the more children a woman has, the more possibilities she has for accessing health-care services as a derived right. However, these proportions slightly decreased for participants with 10 or more children (19.1%).

Utilisation of health-care services also showed a significant association with the number of children. Table 13 shows that childless women experienced poorer utilisation than women with more children; the percentage of childless women who had not attended a doctor during the year prior to the interview was 21.1%, while for participants with children the proportion was about 13%. This could be related to the support received from children in utilising health-care services (e.g. financial support, advice or provision of transport), which is explored further in the qualitative part of the research.

6.4.2 Employment and reasons the respondent did not work

Women were asked whether they were working at the time of the interview. The results show that only 17.7% of the participants were working (Table 14); this low proportion is as expected for their age. Analysis from cross-tabulation found that a higher percentage of working women were affiliated to a health-care provider in their own right (60.3%), while a lower percentage were affiliated as a derived right (spouse: 20.2%, children: 13.6%, both spouse and children: 1.9%). Inversely, of those not working, a lower percentage were affiliated to health-care providers in their own right (48.9%) and a higher percentage were affiliated as a derived right (spouse: 29.0%, children: 15.9% and both: 2.7%).

Table 14 presents the reasons why older women did not work, as indicated by the participants. Of the unemployed participants (81.7%), the majority (62.3%) were not working because of their dedication to household chores. Other reasons the participants mentioned included caring, not having the family's permission to work, not needing a job (they represent the 2.8% of women not working).

Table 14 Reasons respondent does not work

81.7% Not working	Reason why they did not work	62.3% Dedicated to household chores	
		22.3% Because of their age (participants who considered themselves old enough not to work even if they were not retired)	
		14.7% Retired (participants who had worked for a certain amount of years, paying contributions to the social security institutions, and had obtained a retirement pension)	
		8.8% Sick or temporarily disabled (e.g. bone fracture)	
		4.3% Unable to work for the rest of their life; participants who considered themselves unable to work (e.g. due to disability) whether they had a pension or not	
		2.8% Other reason respondent did not work	25.4% They were dedicated to taking care of family members or sick people
			19.7% They did not have their family's permission to work
			13.1% They did not need to work
			41.8% Other reasons
		0.6% Could not find customers or could not find a job	

Source: Author's analysis of MHAS wave 4. Table sums 115% because participants could give as many answers as they considered appropriate.

6.4.3 Reasons the respondent left her last job

Women who had held a job earlier in life but were not working at the time of the interview represented 30.8% of the participants. They were asked the reason why they left their last job; they could give as many options as they considered appropriate (Table 15). More than half of the women left their job because they decided to take care of children or other family members (31.2%). There were also other reasons (21.2%) such as getting married, moving in with a partner, pregnancy or their family not allowing them to work anymore (Table 15). This echoes the literature discussed in sub-section 3.2.3 in terms of the way maternity, raising children and the balance of time influence women's decisions and opportunities to work during their life course.

Table 15 Reason respondent left her last job

<table>
<tr><td rowspan="6">30.8% of women had held a paid job and left it, of which:</td><td colspan="2">31.2% Decided to take care of children or other family members</td></tr>
<tr><td rowspan="3">21.2% Left their last job for other reasons, of which:</td><td>33.8% They got married, moved in with a partner or fell pregnant</td></tr>
<tr><td>12.3% Children, spouse or parents did not allow them to work anymore</td></tr>
<tr><td>53.9% Various other reasons</td></tr>
<tr><td colspan="2">21.1% They were sick</td></tr>
<tr><td colspan="2">18.6% They retired</td></tr>
<tr><td colspan="2">7.3% Own reasons such as payment or inconvenient schedules</td></tr>
<tr><td colspan="2">6.6% Company reasons such as closing down or moving</td></tr>
</table>

Source: Author's analysis of MHAS wave 4. The table sums 106% because participants could give as many answers as they considered appropriate.

6.4.4 Self-assessed financial situation

Of the participants who considered their financial situation as excellent (0.8%), very good (1.4%) or good (21.4%), the majority were unemployed (level of significance $p<0.05$) (Table 6). These results were obtained from cross-tabulation analysis and may indicate that a proportion of participants relied on other sources rather than work for financial support. Unemployed participants with an excellent, very good or good financial situation could have been retired; however, only 14.7% of participants reported leaving their job due to retirement.

6.4.5 Person who paid most of respondent's medical expenses

In order to detect dependency when accessing health-care services and medical treatments, participants were asked who paid most of their medical expenses (it was not specified who paid the remainder). Moreover, a participant's dependency on their spouse could not be measured using this variable (see section 5.8) because the spouse was grouped in the same category as the participant (40.1%) (Table 6). The results show that 23.4% declared that their children, children-in-law and/or grandchildren paid for them.

In relation to employment, the results from cross-tabulation show that 12% of the employed participants relied on their children to pay for their out-of-pocket medical expenses, compared with 25.8% of unemployed participants. This result has a $p<0.001$ level of significance. The reasons why participants relied on their children to pay for their out-of-pocket medical expenses are explored in the qualitative part of the study.

6.5 Need factors

The only need factor analysed in this part of the study was self-rated health. This is because there were not enough variables in the data from the MHAS set that could be used to measure need factors. However, some variables were included that could have enabled research into beliefs as barriers to using health-care services (see Table 3 in sub-section 5.6.3).

6.5.1 Self-rated health

The largest proportion of participants reported fair health (55.1%), followed by those who reported good health (22.7%) and those who reported poor health (18.4%). Some interesting relationships between self-rated health and utilisation of health-care services can be seen in Table 11 (see sub-section 6.2.5). For instance, participants with poor self-rated health were more likely to report lack of money as a reason for not visiting a doctor, even if they felt they had a serious health problem, than those who self-rated their health as excellent or good.

Another interesting relationship was found between the rural and urban areas. Higher percentages of participants in urban areas reported excellent (1.9%), very good (2.4%) and good health (23.2%) compared with participants in rural areas (0.4%, 0.6% and 20.4% respectively). The same pattern was found for fair and poor self-rated health being worse in rural areas.

6.6 Multivariate analysis

Five multiple logistic regressions were conducted (according to the plan described in sub-section 5.6.4). The next three tables (Tables 16-18) report the results from Models 1-9, which were planned in order to determine if predisposing, enabling and need factors had any effect on access to health-care services through the three main health-care providers in Mexico. Tables 19 and 20 report the lack of affiliation to health-care (all providers included) and the utilisation of health-care services. Thus the five outcome variables were as follows: access to IMSS; access to ISSSTE; access to SPS; unafiliation; and utilisation of health-care services. Through this analysis, the first research question (how does having a spouse and/or child(ren) impact on older women's access to and use of health-care services in Mexico?) was partly answered.

The Hosmer and Lemeshow tests were not significant for the majority of the models, meaning that the models were a good fit to the data. The exceptions were Models 2, 8 and 14, which were significant at 0.004, 0.014 and 0.020 respectively. This may indicate problems with these models. Models 2 and 8 do not show important variations, compared with Models 3 and 9 in which the Hosmer and Lemeshow tests were not significant. Models 14 and 15 show some variations discussed in sub-section 6.6.5 (Table 20). In the next sub-sections, access and utilisation are discussed separately.

6.6.1 Access to IMSS health-care

The first logistic regression table has affiliation to IMSS as the dependent variable. Three models were constructed, with Model 1 including only the predisposing factors, Model 2 adding the enabling factors, and Model 3 adding the need factor. The factors were added in this sequence, with need factors at the end, in order to ascertain whether certain predisposing and enabling factors (e.g. number of children and marital status) were and remained significantly after adding other variables and also to understand how these influenced older Mexican women's access to and use of health-care services.

The findings of Model 1 (unadjusted) were unexpected; they showed that divorced and cohabitating women had significantly higher odds of access to IMSS health-care services compared with married women (reference group). These results remained statistically significant even after adding the enabling and need factors to the models (Table 16), odds were slightly attenuated in the second model.

Women with more than four children had significantly lower odds of having access to IMSS health-care services compared with childless women (reference group). This result was surprising, since it does not follow the hypothesis than the more children a woman has, the more possibilities she has to access health-care services.

The changes achieved by adding enabling and need factors to the second and third models were minimal when it came to age: participants (80-90) had significantly higher odds of accessing IMSS health-care services.

Table 16 Multiple logistic regression analysis predicting access to IMSS health-care services

Explanatory variables		Categories	Model 1: P Exp (B)	Model 2: P+E Exp (B)	Model 3: P+E+N Exp (B)	Model 3 N
Predisposing	Age	90+ (ref. group)				91
		80-89	2.422*** (1.539-3.814)	2.308*** (1.461-3.648)	2.310*** (1.462-3.653)	648
		70-79	1.101 (0.920-1.317)	1.024 (0.852-1.230)	1.023 (0.851-1.230)	1828
		60-69	0.994 (0.880-1.122)	0.948 (0.837-1.073)	0.949 (0.838-1.075)	2752
	Marital status	Married (ref. group)				2502
		Single	1.017 (0.893-1.158)	1.024 (0.898-1.167)	1.026 (0.900-1.169)	340
		Cohabitating	1.843*** (1.451-2.343)	1.732*** (1.335-2.250)	1.733*** (1.335-2.250)	159
		Divorced	2.121*** (1.509-2.981)	2.063*** (1.465-2.905)	2.099*** (1.488-2.963)	157
		Separated from a marriage	1.349 (0.969-1.877)	1.381 (0.991-1.925)	1.381 (0.990-1.924)	418
		Widowed from a marriage/cohabitation	1.069 (0.862-1.324)	1.084 (0.873-1.346)	1.084 (0.873-1.346)	1743
Enabling	Number of children currently alive	0 children (ref. group)				228
		1-3 children		1.068 (0.780-1.463)	1.065 (0.777-1.458)	1662
		4-6 children		0.763*** (0.659-0.885)	0.764*** (0.659-0.887)	1981
		7 or more children		0.736*** (0.641-0.847)	0.736*** (0.641-0.846)	1448
	Self-assessed financial situation	Poor (ref. group)				576
		Fair		1.220 (0.660-2.254)	1.213 (0.652-2.257)	3484
		Good		1.020 (0.563-1.848)	1.012 (0.555-1.844)	1140
		Very good		0.847 (0.464-1.546)	0.827 (0.451-1.518)	74
		Excellent		1.149 (0.544-2.429)	1.142 (0.539-2.417)	45
Need	Self-reported health	Poor (ref. group)				972
		Fair			1.151 (0.737-1.799)	2933
		Good			1.119 (0.727-1.723)	1212
		Very good			1.191 (0.768-1.848)	112
		Excellent			1.164 (0.662-2.047)	90
Constant			0.947*	0.949	0.949	
Model $\chi 2$ (10)			63.735	101.464***	103.953***	
Cox & Snell R Square			0.012	0.019	0.019	
Nagelkerke R Square			0.016	0.025	0.026	

Notes:*p≤.05; **≤.01; ***p≤.001 P: Predisposing factors, E: Enabling factors, N: Need factors. Confidence intervals in brackets.

Source: Author's analysis of MHAS wave 4.

6.6.2 Access to ISSSTE health-care

In order to analyse the predisposing, enabling and need factors and their impact on access to ISSSTE, Models 4-6 were produced (Table 17). The results were consistent in Models 4-6, showing that younger participants (60-89 years old) had significantly lower odds of having access to ISSSTE health-care services compared with the reference group (90+ years old). These results remained statistically significant from the unadjusted model (4) to the full model (6). Again, divorced women had significantly higher odds of being affiliated to ISSSTE compared with married women. Similarly to the IMSS results in the last sub-section, participants with more than four children had significantly lower odds of being affiliated to ISSSTE compared with childless women (reference group) (Models 5 and 6).

The results from Model 5 indicate that participants who self-assessed their financial situation as fair or good had significantly higher odds of having access to ISSSTE health-care services than those who considered themselves poor (Table 17); this was attenuated in Model 6 when adding self-rated health as a need factor.

Finally, participants rating their health as fair or good had significantly higher odds of affiliation to ISSSTE than those with poor self-rated health. This could be an indicator of inequality in accessing ISSSTE health-care services.

Table 17 Multiple logistic regression analysis predicting access to ISSSTE health-care services

Explanatory variables		Categories	Model 4: Exp (B)	Model 5: P+E Exp (B)	Model 6: P+E+N Exp (B)	Model 6 N
Predisposing	Age	90+ (ref. group)				91
		80-89	0.585*(0.358-0.958)	0.565* (0.340-0.941)	0.565* (0.340-0.943)	648
		70-79	0.612*** (0.494-0.760)	0.533*** (0.426-0.667)	0.521*** (0.416-0.653)	1828
		60-69	0.849* (0.726-0.994)	0.766** (0.652-0.902)	0.759** (0.646-0.894)	2753
	Marital status	Married (ref. group)				2501
		Single	0.906 (0.768-1.070)	0.931 (0.786-1.101)	0.926 (0.782-1.096)	340
		Cohabitating	1.079 (0.792-1.470)	1.097 (0.782-1.537)	1.098 (0.783-1.539)	159
		Divorced	2.568** (1.404-4.698)	2.489** (1.356-4.571)	2.473** (1.347-4.544)	157
		Separated from a marriage	1.009 (0.653-1.560)	1.087 (0.700-1.690)	1.104 (0.710-1.718)	419
		Widowed from a marriage/cohabitation	0.829 (0.637-1.079)	0.862 (0.659-1.128)	0.863 (0.660-1.130)	1744
Enabling	Number of children currently alive	0 children (ref. group)				228
		1-3 children		0.999 (0.640-1.560)	1.018 (0.652-1.590)	1662
		4-6 children		0.490*** (0.403-0.597)	0.498*** (0.409-0.608)	1982
		7 or more children		0.641*** (0.530-0.777)	0.641*** (0.530-0.777)	1448
	Self-assessed financial situation	Poor (reference group)				576
		Fair		3.597*** (1.845-7.015)	3.143** (1.591-6.209)	3486
		Good		2.582** (1.382-4.829)	2.327** (1.232-4.397)	1139
		Very good		1.590 (0.844-2.996)	1.519 (0.799-2.887)	74
		Excellent		1.956 (0.857-4.467)	1.907 (0.831-4.375)	45
Need	Self-reported health	Poor (ref. group)				971
		Fair			1.845* (1.122-3.035)	2935
		Good			1.788* (1.115-2.867)	1212
		Very good			1.428 (0.884-2.308)	112
		Excellent			1.863 (0.975-3.560)	90
Constant			4.356***	4.360***	4.358***	
Model χ2 (10)			41.239***	160.619***	172.431***	
Cox & Snell R Square			0.008	0.030	0.032	
Nagelkerke R Square			0.012	0.048	0.052	

Notes:*p≤.05; **≤.01; ***p≤.001 P: Predisposing factors, E: Enabling factors, N: Need factors. Confidence intervals in brackets.

Source: Author's analysis of MHAS wave 4.

6.6.3 Access to SPS health-care

Models 7-9 were used to investigate access to SPS. Unlike in the previous models investigating access to ISSSTE health-care services, here participants in the younger age groups (60-69 and 70-79) had significantly higher odds of access to SPS than participants aged 90 or older (reference group). This became significant in Models 8 and 9 after controlling for number of children currently alive and self-assessed financial situation. Possible reasons for the change after adding these variables to the regression models could be related to the lower coverage of SPS; it could be that older women (90+) need more advanced care (e.g. outpatient procedures) and may be getting it from IMSS or ISSSTE instead of SPS. Since in the literature SPS was associated with the lowest quality of services; another explanation could be a preference for ISSSTE and IMSS health-care services over SPS (see sub-section 4.2.5, Table 2).

Significantly lower odds of having access to SPS health-care services were found for divorced and cohabitating participants compared to married participants (Models 7-9).

In another result contrasting with the findings reported previously (Models 1-6) evaluating access to IMSS and ISSSTE health-care services, participants with children were more likely to access SPS than women who were childless (Models 8 and 9); this was significantly and very slightly attenuated after adjusting for need factors.

Participants who considered their health to be fair or good had significantly lower odds of having access to health-care services in SPS than the reference group (poor health), indicating that need factors are strong in predicting access to SPS; this could be a sign that SPS is successful in providing care to those in need.

Table 18 Multiple logistic regression analysis predicting access (affiliation) to SPS health-care services

Explanatory variables		Categories	Model 7: P Exp (B)	Model 8: P+E Exp (B)	Model 9: P+E+N Exp (B)	Model 9 N
Predisposing	Age	90+ (ref. group)				91
		80-89	0.961 (0.614-1.503)	1.031 (0.651-1.634)	1.041 (0.656-1.653)	648
		70-79	1.119 (0.922-1.358)	1.312** (1.072-1.606)	1.339** (1.093-1.640)	1826
		60-69	1.036 (0.910-1.179)	1.180* (1.031-1.353)	1.197* (1.045-1.373)	2753
	Marital status	Married (ref. group)				2500
		Single	1.048 (0.911-1.205)	1.022 (0.886-1.179)	1.026 (0.889-1.185)	340
		Cohabitating	0.759* (0.596-0.968)	0.660** (0.501-0.869)	0.655** (0.498-0.864)	159
		Divorced	0.462*** (0.333-0.643)	0.454*** (0.324-0.637)	0.452*** (0.322-0.637)	157
		Separated from a marriage	0.969 (0.681-1.378)	0.887 (0.619-1.273)	0.875 (0.610-1.257)	419
		Widowed from a marriage or cohabitation	1.013 (0.805-1.276)	0.976 (0.770-1.237)	0.970 (0.765-1.231)	1743
Enabling	Number of children currently alive	0 children (ref. group)				228
		1-3 children		1.464* (1.057-2.028)	1.432* (1.034-1.986)	1662
		4-6 children		2.434*** (2.070-2.862)	2.366*** (2.012-2.784)	1682
		7 or more children		1.727*** (1.493-1.999)	1.720*** (1.486-1.992)	1446
	Self-assessed financial situation	Poor (ref. group)				576
		Fair		0.448* (0.215-0.935)	0.538 (0.255-1.137)	3486
		Good		0.530 (0.259-1.086)	0.597 (0.288-1.238)	1139
		Very good		1.049 (0.506-2.174)	1.113 (0.531-2.331)	73
		Excellent		2.471 (0.856-7.139)	2.462 (0.846-7.165)	45
Need	Self-reported health	Poor (ref. group)				971
		Fair			0.450**(0.254-0.799)	2933
		Good			0.554*(0.316-0.971)	1212
		Very good			0.643 (0.363-1.137)	112
		Excellent			0.874 (0.416-1.834)	90
Constant			2.116***	2.109***	2.110***	
Model χ2 (10)			31.912***	282.280***	304.720***	
Cox & Snell R Square			0.006	0.052	0.056	
Nagelkerke R Square			0.008	0.072	0.078	
Notes:*p≤.05; **≤.01; ***p≤.001 P: Predisposing factors, E: Enabling factors, N: Need factors. Confidence intervals in brackets.						

Source: Author's analysis of MHAS wave 4.

6.6.4 Unafiliation to health-care providers

The results from Models 10-12 investigated those who had no affiliation at all (with all health-care providers considered). They indicate that single participants had significantly higher odds of being uninsured (unaffiliated) than married participants; these results remained significant in the three models. This result is important and follows the hypothesis of single women being disadvantaged in accessing health-care services. Women aged 80-89 had significantly lower odds of being uninsured than those aged 90+. Generally, these results were consistent and did not change much when adjusting for enabling or need factors.

Table 19 Multiple logistic regression analysis predicting unafiliation to health-care services from any provider

Explanatory variables		Categories	Model 10: P	Model 11: P+E	Model 12: P+E+N	Model 12 N
			Exp (B)	Exp (B)	Exp (B)	
Predisposing	Age	90+ (ref. group)				91
		80-89	0.314*** (0.182-0.542)	0.314*** (0.181-0.546)	0.306*** (0.176-0.534)	648
		70-79	0.873 (0.626-1.216)	0.940 (0.669-1.321)	0.918 (0.652-1.293)	1828
		60-69	1.110 (0.869-1.417)	1.149 (0.894-1.475)	1.126 (0.876-1.448)	2754
	Marital status	Married (ref. group)				2502
		Single	1.339* (1.034-0.736)	1.334* (1.028-1.732)	1.330* (1.025-1.729)	340
		Cohabitating	0.659* (0.449-0.969)	0.689 (0.445-1.066)	0.694 (0.448-1.073)	159
		Divorced	0.651 (0.383-1.107)	0.701 (0.407-1.207)	0.685 (0.397-1.181)	157
		Separated from a marriage	0.813 (0.454-1.457)	0.793 (0.442-1.425)	0.802 (0.447-1.442)	419
		Widowed from a marriage or cohabitation	1.236 (0.804-1.899)	1.219 (0.792-1.876)	1.230 (0.799-1.894)	1744
Enabling	Number of children currently alive	0 children (ref. group)				228
		1-3 children		0.961 (0.568-1.626)	0.980 (0.580-1.658)	1663
		4-6 children		1.233 (0.927-1.639)	1.266 (0.951-1.685)	1983
		7 or more children		1.281 (0.979-1.676)	1.284 (0.981-1.680)	1447
	Self-assessed financial situation	Poor (ref. group)				575
		Fair		0.651 (0.193-2.195)	0.552 (0.163-1.873)	3486
		Good		0.968 (0.294-3.181)	0.898 (0.272-2.965)	1141
		Very good		0.963 (0.288-3.212)	0.962 (0.288-3.216)	74
		Excellent		0.924 (0.207-4.118)	0.958 (0.215-4.261)	45
Need	Self-reported health	Poor (ref. group)				971
		Fair			1.610 (0.696-3.724)	2936
		Good			1.176 (0.528-2.618)	1212
		Very good			1.017 (0.451-2.293)	112
		Excellent			0.759 (0.278-2.071)	90
Constant			13.092***	13.195***	13.189***	
Model χ2 (10)			39.892***	50.680***	59.092***	
Cox & Snell R Square			0.007	0.009	0.011	
Nagelkerke R Square			0.019	0.024	0.028	
Notes:*p≤.05; **≤.01; ***p≤.001 P: Predisposing factors, E: Enabling factors, N: Need factors. Confidence intervals in brackets.						

Source: Author's analysis of MHAS wave 4.

6.6.5 Utilisation of health-care services (Models 13-15)

The final regression table examines utilisation of health-care services as the dependent variable. Models 13-15 were designed following the same structure as the previous models (Table 20) in order to investigate whether the selected variables had any effect on the utilisation of health-care services (all health-care providers were considered). The dependent variable was whether the participant had visited a doctor or medical personnel during the year preceding the interview. For these models, an extra independent variable was added (not used in the previous models): person who paid for most of the out-of-pocket medical expenses, with four categories (1: children, children-in-law and grandchildren; 2: another person; 3: respondent and/or spouse; 4: did not have expenses).

The results in Table 20 show that cohabiting participants had higher odds of utilising health-care services than married women; this was significant in Model 13, but adding more explanatory variables to the regression (number of children currently alive; self-assessed financial situation; out-of-pocket medical expenses; access to IMSS, ISSSTE and SPS; and self-rated health) affected the overall model fit and it became insignificant as the enabling and need factors became stronger.

The other categories (those who paid for their own out-of-pocket medical expenses, their spouse paid or did not have out-of-pocket medical expenses) had significantly lower odds of visiting a doctor than those whose children, children-in-law or grandchildren paid for their out-of-pocket medical expenses (Models 14 and 15), even when adding need factors (self-reported health). This may indicate that the financial support provided by children is a factor that influences the utilisation of health-care services for older women in Mexico.

Finally, in Model 15, participants who self-rated their health as fair, good or very good had significantly lower odds of visiting a doctor during the year prior to the interview than those who considered their health poor (reference group). This is a good indicator of the strength of need factors for older women in Mexico. It is also an expected result, since as seen in section 3.4, need factors have been found to be very strong indicators of utilisation in other studies. Moreover, according to Andersen, in order to achieve equality the need factor should be the main determinant (see section 2.7). Thus, the results from Model 15 show that older women with poor health have higher odds of using health-care services in Mexico.

There is a very interesting result from this regression. Participants who did not have affiliation (access) to IMSS, ISSSTE and/or SPS had significantly lower odds of using health-care services than those who did have affiliation (Model 14), as would be expected. Nevertheless, when the need factor was added (full model), participants with no affiliation (to IMSS, ISSSTE and/or SPS) had considerably higher odds of using health-care services. These results were also significant, and an indicator that the need factor is very strong when it comes to utilisation of health-care services for older Mexican women. The way that these participants were using health-care services without affiliation would be the private health-care sector (according to the literature; sections 4.4 and 4.5). Mexico has one of the highest out-of-pocket medical expense rates among the OECD countries, and this could include private health-care consultations and treatments (OECD, 2017). It may also indicate that when it comes to need (e.g. presence of disease or emergencies) Mexican older women look for a way to visit a doctor or medical personnel, even if it is with a private health-care provider, it also may indicate some affordability of the private health-care since participants could obtain such services.

Table 20 Multiple logistic regression analysis predicting utilisation of health-care services during the year prior to the interview (visit to a doctor or medical personnel)

Explanatory variables		Categories	Model 13: P Exp (B)	Model 14: P+E Exp (B)	Model 15: P+E+N Exp (B)	Model 15 N
Predisposing	Age	90+ (ref. group)				90
		80-89	1.654	1.61	1.646	646
			(0.985-2.779)	(0.939-2.761)	(0.955-2.837)	
		70-79	0.915	0.946	1.006	1824
			(0.705-1.188)	(0.719-1.245)	(0.762-1.328)	
		60-69	0.885	0.904	0.939	2748
			(0.741-1.058)	(0.751-1.088)	(0.779-1.133)	
	Marital status	Married (ref. group)				2497
		Single	0.923	0.879	0.904	340
			(0.762-1.117)	(0.721-1.072)	(0.740-1.104)	
		Cohabitating	1.374*	1.052	1.043	159
			(1.006-1.877)	(0.737-1.500)	(0.729-1.494)	
		Divorced	1.249	1.064	1.12	157
			(0.803-1.942)	(0.675-1.677)	(0.708-1.773)	
		Separated from a marriage	1.312	1.254	1.208	418
			(0.844-2.040)	(0.797-1.971)	(0.763-1.912)	
		Widowed from a marriage or cohabitation	1.085	1.033	1.007	1737
			(0.800-1.470)	(0.756-1.412)	(0.734-1.383)	
Enabling	Number of children currently alive	0 children (ref. group)				228
		1-3 children		1.5	1.464	1660
				(0.992-2.266)	(0.966-2.220)	
		4-6 children		1.024	0.964	1977
				(0.821-1.277)	(0.770-1.206)	
		7 or more children		0.966	0.955	1443
				(0.784-1.190)	(0.773-1.179)	
	Self-assessed financial situation	Poor (ref. group)				575
		Fair		1.157	1.997	3479
				(0.394-3.401)	(0.668-5.975)	
		Good		1.458	2.144	1137
				(0.510-4.169)	(0.739-6.221)	
		Very good		1.614	1.94	73
				(0.560-4.653)	(0.665-5.662)	
		Excellent		2.345	2.583	44
				(0.715-7.687)	(0.779-8.560)	
	Person who paid for out-of-pocket medical expenses	Children, children-in-law and grandchildren (ref. group)				1241
		Another person		0.371***	0.4138***	43
				(0.294-0.469)	(0.327-0.524)	
		Respondent and/or spouse		0.239**	0.249*	2131
				(0.082-0.701)	(0.085-0.730)	
		Did not have expenses		0.480***	0.506***	1893
				(0.401-0.576)	(0.422-0.608)	
	Access to IMSS	Yes (ref. group)				2721
		No		0.366***	2.631***	2589
				(0.299-0.449)	(2.142-3.230)	
	Access to ISSSTE	Yes (ref. group)				991
		No		0.454***	2.231***	4319
				(0.354-0.584)	(1.733-2.872)	
	Access to SPS	Yes (ref. group)				1708
		No		0.574***	1.634***	3602
				(0.463-0.714)	(1.313-2.034)	
Need	Self-reported health	Poor (ref. group)				968
		Fair			0.183*** (0.107-0.315)	2927
		Good			0.296*** (0.182-0.483)	1211
		Very good			0.494* (0.301-0.810)	112
		Excellent			0.711	90
					(0.373-1.355)	
Constant			0.160***	0.160***	0.160***	
Model χ2 (10)			15.811*	222.387***	298.772***	
Cox & Snell R2			0.003	0.041	0.055	
Nagelkerke R2			0.005	0.074	0.099	

Notes:*p≤.05; **≤.01; ***p≤.001 P: Predisposing factors, E: Enabling factors, N: Need factors

Source: Author's analysis of the MHAS Dataset (2015). Confidence intervals in brackets.

6.7 Summary

This chapter has examined the access and utilisation of health-care services for older Mexican women. Descriptive, bivariate and multivariate analyses were conducted using SPSS, following Andersen's behavioural model structure.

Some of the most noteworthy results were that around 7% of the participants did not have access to health-care services at all. Double affiliation of health-care services is possible in Mexico, and the data showed that around 15% of the participants were affiliated to more than one health-care provider.

Some of the interesting relationships found in the bivariate analysis included the fact that the way participants obtained health-care affiliation (in their own right or as a derived right) varied according to the health-care provider in question. Participants affiliated to IMSS, ISSSTE, PEMEX, Defence or Marine were mainly affiliated as a derived right, in contrast to women affiliated to SPS. This is investigated further in the qualitative analysis, since it may be due to the access policies of the providers or even related to the fact that the majority of formal employees are men (e.g. PEMEX). Nevertheless, from this analysis, it can be concluded that dependency for affiliation (derived rights) is strongly linked to the health-care provider in question.

The results from the multiple logistic regression analysis show that the need factor (self-rated health) was a strong determinant of access to SPS health-care services (but not IMSS or ISSSTE), being an indicator of equality in access to health-care.

According to the regression analysis, participants with children were more likely to access SPS than women who were childless. This is an interesting result because it is not necessary to use a derived right from children or a spouse in order to affiliate to SPS. This is investigated further in the next chapter.

Other interesting relationships were also found, such as the fact that participants whose children paid for their out-of-pocket medical expenses had significantly higher odds of visiting a doctor compared with the rest of the participants. This indicates that the financial support provided by children is a factor influencing the utilisation of health-care services for older women in Mexico. Unfortunately, support from a spouse could not be

investigated further, since the MHAS data categorised the participant and spouse together in key questions. This topic is investigated further in the qualitative analysis (next chapter).

Chapter 7: Results from the qualitative analysis

7.1 Overview of the chapter

As explained in section 5.7, a thematic analysis of 20 semi-structured interviews was carried out in order to help answer the three research questions of this study:

1. How does having a spouse and/or child(ren) impact on older women's access to and use of health-care services in Mexico?

2. What are the barriers older Mexican women face in gaining access to and using health-care services? And how can they overcome them?

3. What has been the experience of older women in Mexico of gaining access to and using health-care services since the introduction of SPS?

This chapter partially answers research questions 1 and 2 (building on the quantitative analysis), and fully answers research question 3. The results from the thematic analysis are reported here. Moreover, the themes are explained and accompanied by participants' quotations in order to illustrate the content and provide evidence.

7.2 Data and analysis

Data were collected from interviews with 20 older women in the state of Coahuila (Mexico), in the city of Saltillo and three of Arteaga's rural communities (see Figure 6, sub-section 5.7.1). Maximum variation sampling was used to ensure the data was as varied as possible and covered both rural and urban areas; a discussion of the sampling strategy was provided in sub-section 5.7.1. The interviews were semi-structured, with questions on the topics of family, health status, access to health-care services (and barriers), support from a spouse and/or children, utilisation of health-care services (and barriers), and work (see Appendix F). During the interviews, the participants talked about the composition of their family network, affiliation(s) to health-care they currently or previously had, the way their spouse and/or children helped them to access and use health-care services, and their feelings about it. They also discussed how their spouse and/or children helped them to pay for their out-of-pocket medical expenses. Moreover, they shared their problems with accessing and using health-care services, whether they had overcome such problems and

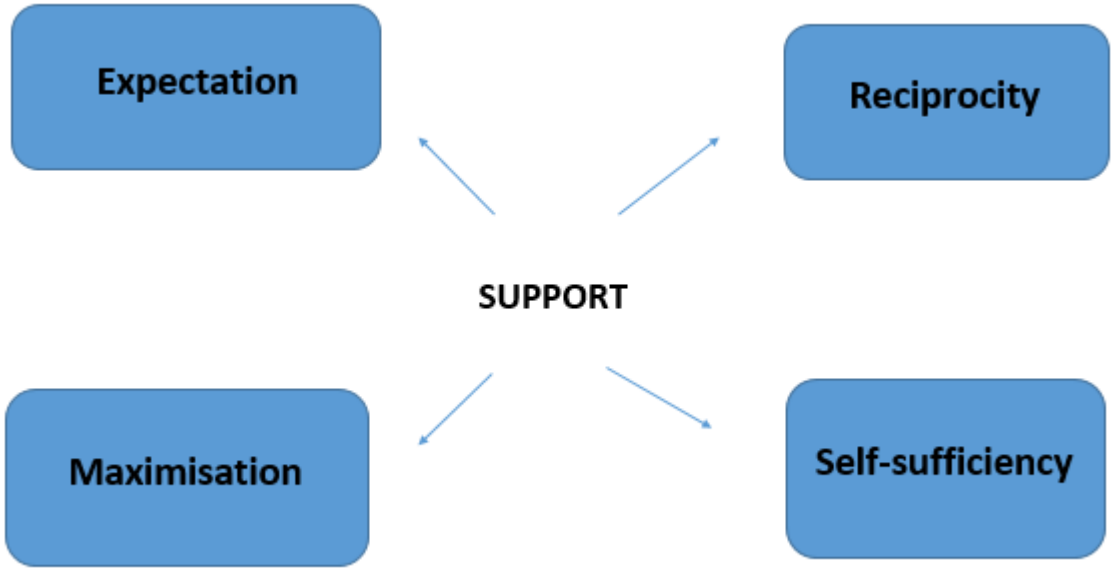
how they did so, and their work status and employment benefits (social security). Demographic information about participants (age, area where they lived, number of children and marital status) and a discussion about their financial status based on observations have been provided in sub-section 5.7.1 and Table 5. It was interesting to find that a high number of participants relied on others for access to health-care services (13/20).

After the process of transcribing interviews, coding and re-coding data (using NVivo), formulating and answering questions about the data, and taking notes, several theme maps were created. These were reviewed several times and revised before settling on the final versions. The full process of finding and defining the themes has been explained in sub-section 5.7.3. In order to present the results, two thematic maps were created; the first is 'Support', presented in the next section, and the second is 'Barriers', discussed in section 7.4.

7.3 Support

The thematic map 'Support' (Figure 7) addresses research question 1. Support is a key concept, and four themes were identified in relation to it: expectation; reciprocity; maximisation; and self-sufficiency. Support refers to any kind of help in accessing and using health-care, as well as payment for medical expenses by participants' children and spouses. Each theme is independent, and they are composed of the experiences of participants with different profiles. While some participants perceived support as a reciprocal exchange with their children, others believed it to be their children's responsibility or because they were good children (e.g. looking after their mothers when needed). Other participants did not expect support or actively avoided it in order to remain self-sufficient and avoid causing trouble for their children (e.g. male children having problems with their wives due to the support they provided to participants). This factor (older women trying to avoid problems with children-in-law) has been previously documented in Mexican literature (Varley and Blasco, 2000).

Figure 7. First thematic map: Support



Source: Author's analysis

Theme 1, 'Expectation', refers to a participant expecting to be dependent or to rely on others (mainly spouse but also children) for support in accessing and/or using health-care services.

Theme 2, 'Maximisation', in this study means to use more than one of the available routes to health-care affiliation (e.g. in own right, or through a spouse or child(ren)). This is related to double or multiple affiliations and understanding, negotiating or in some cases breaking the health-care providers' rules.

Theme 3, 'Reciprocity', refers to participants' life history of giving to and receiving from their child(ren) in relation to accepting support from them in old age.

In contrast, Theme 4, 'Self-sufficiency', explores the views of participants who did not want to receive help from their children even when they had this option. This theme also explores the views of participants who were self-sufficient because they did not have the option to rely on others (e.g. childless and single).

Support itself is hard to define (Allen and Wiles, 2013); since it is a broad concept, it can have different meanings for participants. In other research, participants have considered support to include financial aid, transport or help at home (ibid). In this research, any kind

of help that facilitated participants' access to and/or use of health-care services was considered support. The types of support participants received from their children included: facilitating affiliation to IMSS or/and ISSSTE; companionship (e.g. going together to the health-care centre; visiting often (detecting needs); and providing transport means to travel to health-care centres and hospitals (e.g. paying taxis, driving them). Other ways in which children supported their mothers were: encouraging the participant to use health-care services; reminding them about doctor's appointments and taking medication; making plans for medical emergencies; and keeping track of their health. The support participants received from their spouses mainly comprised financial support, transport, advice and company (e.g. going together to health-care centres) and derived rights to IMSS or ISSSTE. Participants often had the option to choose whether to use support from their children, spouse or both. A key finding related to support received was that interesting variations in time were found; participants received temporary support especially from children reflecting a phase of participants' life courses. This temporality of support or time-limited support that participants received during their life courses was interesting since it was strongly related to policy and it means that it was not always possible for children to provide permanent support to parents (e.g. access to health-care as derived rights). It was also related to personal circumstances (e.g. change of financial situation).

7.3.1 Theme 1: Expectation

Expectation can be defined as the feeling that something should happen (Cambridge, 2019) (e.g. participants expecting a spouse and/or children to support them). Considering that within the concept of familialism there is a responsibility to ageing parents, there may be a 'normative expectation' of adult children's duty to support parents (Silverstein *et al.,* 2006:1069 citing Cicirelli, 1988, 1990). Expectation of support was the strongest pattern found in the data (e.g. relying on others for health-care), both in terms of the high number of dependent participants (13 out of 20) and because of the readiness of participants to accept support.

Mothers who did not have the 'need' to ask for support had a different understanding from those who were in need. While for some it was because they were proud, for others it was not a 'good' or 'bad' thing. The concept of need was also different for each participant in the study (e.g. some appeared to live in worse conditions than others but did

not consider themselves to be in need). However, the majority of the participants expected their children to support them voluntarily, especially in emergency situations. They identified their children as good (because they would help their mothers when in need) and did not see the support as an obligation (because they had not demanded support):

'Financially, maybe because [I] haven't had the need, but I think that if there is a need they [my children] would support me.' (Laura).

'Interviewer: If it was something unexpected, let's say a heart attack or an accident, would you prefer to go private as well? Or where would you like to get medical attention?

Monica: Well I would like them [my children] to look where to get medical attention for me, but I don't want to go to IMSS.' (Monica).

Apart from financial support and looking for health-care on their behalf, participants also expected their children to carry out other activities in support of their health (e.g. living close, sorting out living arrangements):

'Interviewer: For example, if you find you get a disease, something such as a long-term condition, a chronic disease. Let's say, for example, cancer, leukaemia or blindness (for example that you could not see). What would you do to deal with this? Where would you get medical attention? Where would you go?

Anita: No, well that is up to [my] children. What is one going to know about that when one is sick and has no money?... They have never left me on my own. I have no reason to complain. First God, he gives them a good heart, so they don't get impatient with me. Because many people are complaining about children being too distant with their parents… and no, I haven't got there, my children are still checking on me.' (Anita).

[...]

'Anita: My back hurts, sometimes I am very sick and I just lie on the bed… That is why I am here [in Saltillo] and not in the ranch, I have my house in the ranch… But I'm alone now [widowed] and they [my children] brought me here and they haven't let me go back.

Interviewer: They do not let you go back?

Anita: I said: well, who is going to support me? I have to move [to be] by their side, what else can I do?

Interviewer: Ok, Is there something in particular that causes them worries about your health?

Anita: No, at my age, well… it has to be what God wants.' (Anita)

Anita's children had brought her to Saltillo from the remote rural area where she used to live, even though she had expressed that it was somewhat against her will. Her children may have made these decisions to provide her with faster access to health-care centres and hospitals, since in the ranch where she had previously lived, there was only a small health-care centre with basic services. When she had lived in the ranch, her husband had taken care of her transportation and health-care. However, after he passed away, her children took on that responsibility. She had access to IMSS through the child with whom she was living at the time of the interview (as IMSS requires). Living nearby, her children could monitor her health better than if she had stayed in the ranch. The extract denotes the expectation she had of her children to arrange matters and make decisions about her health, the limited power she had in these matters due to her poor health and financial status, her feelings of hopelessness about her health and age, her loneliness due to missing her husband, and her dependency on her children. She thought she was very old (81 years old): 'thank God I'm still alive'. Her age could also have been a factor in the expectation of receiving support. A study carried out in the USA (in a culture in which it is better to give than to receive (Antonucci *et al.,* 1987)), pointed out that after 50 years old, people may find it more appropriate to receive than to give (ibid). Anita found it appropriate to receive support from her children, and felt grateful for it.

Financial support from children made participants feel good about their situation, reducing or eliminating worries about out-of-pocket medical expenses, as the following extracts demonstrate.

'Interviewer: Do you spend out-of-pocket?

Martha: No, I have my daughters, they umm. They get me there [to the health-care centres], some pay the consultation and another pays for the medication.' (Martha).

'Interviewer: How do you consider your financial situation?

Sofia: Well, I thank God it's good until now because as I tell you, my children are good all of them.' (Sofia).

The provision of support in older age was seen (for a few participants) as their children's responsibility. Sofia (a widowed woman living alone in a rural area) said that her 14 children took turns to stay overnight with her in the event of her needing something such

as company, help with cooking or taking her medications. She pointed out, 'The ones who live here [in the same rural area] help them [the ones living far away],' since not all of them could stay overnight. She implied that her children helped each other with their responsibilities instead of helping her. She placed the responsibility for her support on them; thus, they made agreements to fulfil Sofia's needs. Another participant, Patricia, knew her five children would take turns to support her (financially) and she felt good about it. In the following quotation, she described how some of them talked about it:

'Interviewer: Ok, so tell me more about that [support], how is that? Who pays what or who helps you with what?

Patricia: What kind of help for example?

Interviewer: To access and use IMSS.

Patricia: A daughter when it's her turn, she says "I'm going to give her" and she does, or a son he says "now it's my turn, I am going to give her". Yes (laugh).

Interviewer: Money?

Patricia: Yes money.' (Patricia)

The first part of this theme has shown participants' support expectations of their children. However, it was more common for participants to expect to receive financial support from, or depend on, their spouses without feeling guilty or a burden. For these participants, this was a different matter from depending on their children. This factor is brought up in Samantha's extracts; she found it natural and expected to rely on her spouse:

'Interviewer: Why you did not work before now?

Samantha: No, I depended financially on him [my spouse] for everything… I know how to work… and I like it. But when I married him I had no need to work because I depended financially on him.' (Samantha)

[…]

'Interviewer: So you told me that your children cannot affiliate you to IMSS or any other health service… for their job situation right now.

Samantha: Right.

Interviewer: And that you could not rely on them in case of an emergency or an accident because there is no budget saved for that?

Samantha: Right.

Interviewer: But is there any support they give you? For instance, for you to access health-care services (taking you to the doctor), giving you health advice, buying your medication, any kind of help?

Samantha: I've never had the need to ask for their support.' (Samantha)

[…]

'Interviewer: Could you rely on your children in case you need it?

Samantha: I don't think so… it is sad to say it but I don't think so.' (Samantha)

The extracts above show how Samantha saw a responsibility in her spouse to provide support for her that she did not see in her children. She had been a working woman until the age of 30, when she had moved in with her spouse; she had then stopped working and instead relied on him. After he passed away, she 'had to work' again. Her financial situation was bad, her house was in poor condition, her income was low and she had two underage grandchildren living with her. However, even though she was aware of her financial status and her house condition, she did not consider herself in need of support. She was a proud and self-sufficient woman. She did not consider it a possibility to rely on her children, even in an emergency. The reasons for this were her bad relationship with her children (even though two of her grandchildren lived with her), her children's poor financial situation, and Samantha's pride and independence.

After the pattern of preference for dependence on a spouse was noticed, the question of why participants were happier to depend on support from their spouse than their children (if they had the option) arose. Marriage can be a more co-dependent relationship. Dependence on children may not be as strongly determined (culturally) as dependence in a husband-wife relationship; this may be influenced by gender roles and the Mexican culture, in which men are expected to work and provide for the family and women are expected to depend economically on their spouses (see sub-section 4.2.2). However, other qualitative research investigating older women's experiences of ageing has found that: 'in old age most of the participants found themselves dependent on their husband's income (or widow's pension), their lifetime savings (when they managed to do so), but mostly they found themselves dependent on their children or extended family' (Makita, 2012:137). Company is also more of an expectation from a spouse, since adult children may not live with their mothers and often have other responsibilities/obligations to their own spouse

and children. Another reason could be that even though the participants' children were adults, some participants felt that their role as parents was to help/provide for their children as opposed to receiving support from them. However, support-giving from participants to their children was not studied in this research. Dissatisfaction when receiving help from children could be another factor that influenced participants' preference to receive support from their spouses.

The next extract is from Laura, retired voluntarily (with no pension or IMSS benefits in her own right):

'Interviewer: Let's talk a bit about your job, you told me that in your last job you had IMSS.

Laura: Yes.

Interviewer: Why did you stop working?

Laura: Because they made staff cutbacks.

Interviewer: Ok, so did you decide not to look for another job, or how was that?

Laura: Well, I didn't work anymore because… well I had a spouse, I spent many years with him and I had only one dependent child, so… Well, there were many years of working for me and I said to him [my spouse] I don't want to work; I didn't look for a job anymore.' (Laura)

After Laura had lost her job, she did not feel any pressure to look for another one, because she expected that she would have options for affiliation either through her spouse or through her child, and that there would be no economic pressure since her husband was able to provide for the family. She had made this decision after 23 years of working and having access to IMSS in her own right; she felt tired of working. At the time of the interview, she considered her economic situation to be good; she and her husband had enough money to pay for their food and bills, but not other expenses such as clothes, shoes or private medical expenses if needed.

Sometimes participants were offered help even though they had not asked for it. This could have influenced their expectations of support, which could be because 'older people are seen as needing to receive support from other people as they age' (Allen and Wiles, 2013:670). Moreover, family has been identified as an expected source of support in other research. Sin (2006), in a study conducted in the UK including white British and Asian-Indian older adults, found that Asian-Indian groups showed a high level of expectation of

support from family (ibid), and also that female British respondents identified the family as an expected source of support, more so than men, who named the state instead (ibid).

This theme helped to understand participants' reasons for expecting support. While support from a spouse was more socially expected, support from children was related more to feelings of hopelessness (due to old age), vulnerability (feeling too old, in poor health and/or bad financial status) and need. It was also about placing responsibility on children and trusting that they were good people.

7.3.2 Theme 2: Maximisation

This theme explains how the participants commonly maximised their options to get health-care. Some participants did not mind breaking the rules if it meant they could obtain extra benefits from the health-care providers, some considered themselves lucky to have the opportunity to maximise their benefits, and some accepted support from their social networks in order to receive a better and faster service. Other participants were not aware of the health-care providers' regulations and thus unknowingly broke the rules (SPS do not allow participants to affiliate if they already have IMSS or ISSSTE (Seguro Popular, 2021)).

As explained in sub-section 4.2, each health-care provider has its own regulations, benefits and restrictions. Moreover, the social security regulations in Mexico are based on family support. The health-care providers' rules were negotiated differently by participants and their families, in most cases in a way that was more convenient and advantageous for the participant. The benefits that children and spouses can entitle to participants through IMSS and ISSSTE vary (mainly in the amounts for pensions and life insurance). Those working in the formal sector can provide affiliation to IMSS or ISSSTE to their dependents (mother/spouse) (see section 4.2); participants were generally happy to receive this benefit and it did not cost their children/spouse extra payments. Thus, they did not feel they were burdening family when accepting the affiliation.

The next table (21) facilitates an understanding of the way multiple affiliations can arise. Usually, the more affiliations, the more benefits or options the participant had. Even when health-care was provided through all of the shown options (IMSS, ISSSTE and SPS), the quality of services, location, coverage and waiting times varied, as well as the entitlement to life insurance and pensions (IMSS and ISSSTE only).

Table 21 *Multiple affiliation examples*

Patricia	Health-care providers			Angela	Health-care providers			Sofia	Health-care providers		
	IMSS	ISSSTE	SPS		IMSS	ISSSTE	SPS		IMSS	ISSSTE	SPS
Access	Affiliated through a son			Access	Affiliated though daughter		Affiliated on her own	Access	Affiliated through her son	Affiliated through her son	
	Affiliated through a son										
	Affiliated through a daughter										
	Affiliated through spouse										

Source: Author's analysis. Real participants.

Double and multiple affiliations are shown in Table 21, presents 3 case based on participants' views (Patricia and Angela's perceptions of this are explained below). The way participants understood the regulations influenced the way they ignored, broke, challenged or negotiated the rules. Participants who had several affiliations were maximising their access to health-care services and the associated benefits (pensions and life insurances):

'Interviewer: And, well you told me you have access to health-care through your husband.

Patricia: Through my husband, yes.

Interviewer: Is that through his job?

Patricia: His job.

Interviewer: Ok, if for any reason he could not provide you with this service anymore, let's say that he loses his affiliation, do you have another way to access?

Patricia: Well, the children.

Interviewer: Through your children?

Patricia: Yes, they have me insured as well.

Interviewer: At IMSS as well?

Patricia: Yes, at IMSS.

Interviewer: Ok, so you have affiliation through your children and through your husband.

Patricia: And my husband.

Interviewer: How many children have affiliated you?

Patricia: Umm, one daughter and two sons.

Interviewer: Ok so you have three [affiliations] and your husband's right?
Patricia: Yes.' (Patricia).

Having several affiliations gave Patricia peace of mind, as it meant that she did not have to worry about losing her affiliation if her husband lost his job. As she said she had four affiliations to the same health-care provider, she would be entitled to a pension if any of her insured children/spouse passed away, maximising her benefits in comparison with Martha (who did not want to accept more than one affiliation, as discussed below). Moreover, if one of her family lost their job, Patricia would maintain her access to IMSS through the others. This made her feel confident about her access.

The number of children was not always a factor in maximising options to access health-care. There were other factors (discussed later in this chapter) that also influenced the number of options the participants had, such as location and work conditions. For instance, Angela was a mother of four children, but only one could provide her with access to IMSS and only for a limited period of time (see sub-section 7.4.4). However, interestingly, the five participants maximising their access options (by double or multiple affiliation) all had four or more children and were characterised as having a medium socio-economic status (see Table 5, sub-section 5.7.1).

One reason why participants liked to have double affiliation was the better and faster service at a particular provider.

'I got my affiliation [to SPS] because of that, because something can happen that I need it, and at IMSS sometimes, I mean it is a very good service but we are too many people. Many people complain about it… in IMSS there are very good doctors but what happens is that it is very small and at this point we are so many people and sometimes we don't get it… we see that sometimes there are two nurses for two, three or four wards: impossible!' (Martina).

Another advantage of having more than one affiliation was the opportunity for different experiences; this allowed participants to be more critical of the services they received and gave them a choice to decide which provider they preferred to use. This was Angela's strategy for maximising her benefits; having affiliation in her own right to SPS as well as IMSS through her daughter, and using both depending on her circumstances, breaking SPS

rules. She challenged the system by seeking an outpatient procedure (eye surgery) in SPS (while affiliated to IMSS) because of the faster service at SPS:

'At the General Hospital [SPS]. Well, because IMSS is slower and so, and there I was lucky that, that it [the computer system] did not show that I already had IMSS, because if it shows that I have IMSS they would not have proceeded with the surgery or they would have charged me [about $MXN 17, 000.00 (£680)] for it when trying to get it there.' (Angela).

Angela discovered that the communication between health-care providers was not efficient enough for SPS to detect her double affiliation. In this way, she maximised her benefits by having two affiliations (IMSS and SPS) and thus getting the outpatient procedure she needed faster, while still getting her regular medication and other consultations from IMSS. However, other participants preferred not to maximise their benefits and respect SPS rules; this was the case with Martha, who preferred to obtain affiliation through her spouse. This is in line with the last theme, in which participants expected to receive support from their spouse rather than their children:

'Interviewer: If he [your husband] could not provide you with that insurance [IMSS] for some reason, let's say if he loses his job, what other options would you have?

Martha: My children… any of them, the five.

Interviewer: The five?

Martha: Yes because two of them do not work. The other ones do work and they wanted to affiliate me, but I'm not accepted there [IMSS] because I am insured through my husband.

Interviewer: Ok, so do you have more options?

Martha: Yes, and I don't want to. Look, my husband has never stopped working, but as I told you in that case, well… it is my right as the lawyer told me that it's my right. I think I have to keep my husband's insurance because… because now that he is alive he has me insured, if he stops working, he would be a pensioner and that leaves me the health insurance and... And the pension. And if he would pass away, he leaves me the pension and the life insurance, the medical one.

Interviewer: It comes together with the pension and IMSS?

Martha: Exactly, exactly, that is why I have not accepted my children to affiliate me.' (Martha).

Martha viewed the health insurance (affiliation to IMSS) as her legal right, which she had obtained through her husband. She recognised that she would not get the same benefits if

her children derived their rights to her and so she made a decision in order to maximise her benefits. Martha is an example of a married woman with seven children and plenty of options for affiliation to a health-care provider (through a political party, spouse, children or in her own right), which aligns with the assumption that having more children and a spouse will give older women more options and an advantage in accessing health-care services. The reason why Martha did not allow her children to affiliate her was because she understood that according to the health-care providers' regulations, it was not permitted to be affiliated to IMSS by several different means (through both spouse and children). However, according to IMSS rules, it is possible; thus Martha's lack of knowledge and uncertainty was affecting the benefits she could obtain through her children (e.g. pension or life insurance if they passed away while affiliated). She also understood it was not possible to be affiliated to SPS and IMSS at the same time. She knew that the social security benefits provided by IMSS (pension and life insurance) were better when affiliated through her spouse rather than through her children (see section 4.2). Her strategy was to ensure she did not lose the benefits she already had through her spouse, who had a stable job, instead of maximising them using both spouse and children's affiliation. Having many children and a spouse maximised her options compared with other participants. Other participants who also understood that multiple affiliations were not allowed felt that they were respecting the rule and considered it reasonable:

'And really, yes, I agree because there are many people who do not have any [health-insurance], and preference is given supposedly to those who do not have... any kind of service.' (Karen).

The rules governing dependency on family members in Mexico (see sub-section 4.2.2) (being financially dependent or co-residing with children as a requirement for affiliation) were an impediment to obtaining health-care as a derived right. Some participants broke these rules by being affiliated through their children but not living with them or/and not depending economically on them (e.g. Angela), whereas others explained that they could not obtain affiliation as a derived right because they did not have the same address as on their ID; others moved in with their children and obtained affiliation through them. These differences call attention to the inequalities in accessing health-care, which may be due to bad administration on the part of the health-care providers (employers do not know the

policies or how to apply them). It could also be that the rules and/or requirements were different at the time when participants received their affiliation, or it could be due to corruption (misuse of public power). Using political connections to get superior coverage was possible, despite SPS and ISSSTE requirements (SPS, 2019; ISSSTE, 2015), as the next extract suggests:

'Interviewer: If you would want to, could you get affiliation there [SPS]?

Martha: They have offered it to me, to affiliate me because I am militant in a political party… and through the party they… they offer me SPS affiliation even though I have IMSS through my husband, but they get me another health insurance. And SPS has requirements; 'If you have IMSS you don't get an affiliation', But I am lucky.

Interviewer: Through this party is it possible?

Martha: Exactly, they can affiliate me, they can affiliate me.' (Martha).

Knowing doctors or people working at IMSS was another way of using corruption to get a faster service:

'And he got health-care there, apart from that, there was an acquaintance, everything was very fast. Faster because there was a specialist on that and he was an acquaintance of my nephew, he said: "well, I'll get him to surgery" and well: very fast.' (Martina).

Martina explained how corruption within the health-care services made it possible for her family member to skip the queue of patients waiting for surgery and receive it faster. She felt lucky to be able to use her social connections at IMSS to get a platinum elbow implant, which in a private health-care centre would cost $MXN 100,000.00-150,000.00 (£4,000-6,000). She also felt reassured that her family and social connections could help her in the future if needed. She was proud of her strategy for maximising IMSS services. Martina's experiences and perspectives in relation to viewing her family as a team and reciprocity, adopting the life course perspective lens, are further explained in the next section.

Another way of maximising access to health-care services for participants was using other providers' services, even while affiliated to IMSS and/or SPS and/or ISSSTE, because it was allowed and it was more convenient for them. For instance, participants in rural areas who were affiliated through their children to a health-care provider located in Saltillo (IMSS and/or ISSSTE) commonly used CMR or private services. This depended on their needs; if

they needed a non-urgent consultation it was easier for them to walk to the local health centre and get their consultation and medication there, saving money and time in terms of transportation (instead of going to Saltillo). However, they liked to maintain their access to IMSS or/and ISSSTE for use in emergencies, since these providers had greater coverage.

This theme has helped to understand how participants were able to maximise their options to obtain affiliations to health-care providers, as well as their understanding and negotiation of the rules, with some respecting the policies and others breaking the rules in order to obtain superior coverage. It also helped to understand how having a spouse and/or children could impact on accessing health-care.

7.3.3 Theme 3: Reciprocity

Reciprocity was not easy to examine in this study, since several participants could have been unknowingly receiving support in a reciprocal way. This is partly because the views of their children were not gathered and so it was difficult to ascertain whether the received support was given in reciprocity by others. Most of the participants fell into the pattern of expecting support (Theme 1); only two participants were evidently receiving it as a reciprocal exchange and talked about it in this way during the interview. As the theory explains: 'when we give something, we trust that something of equal value will be reciprocated' (Bengtson *et al*., 1997:S78). Older women did not consider the relationship with their spouse to be reciprocal; the reason for this could be that in husband-wife relationships, male spouses were culturally expected to provide (see sub-section 7.3.1). The life course lens helped to find these patterns by analysing participants' interactions with their family members during their lives.

The first participant in receipt of support through reciprocity was Martina; she was a divorced participant with four children. Looking at her life story during the interview, it appeared that she had been married at a very young age and lived in the traditional Mexican way (where the husband worked to support the family and the wife took care of the children and the household) for over a decade. When she was in her 30s, she and her husband divorced. Her ex-husband cut contact with Martina and her children; she tried to get financial support from him, but it was not possible, and she was still irritated about this, saying that she had suffered because of his irresponsibility. She had no option but to work for many years to provide support and education to her children. She found being a

single mother in Mexico to be extremely difficult. She had no support from the government (e.g. benefits, health-care or childcare), and SPS did not exist then, so she worked in the formal sector for years (with access to IMSS). Unfortunately, she quit her job two years before she was entitled to a retirement pension, and so she did not get any pension for her work. She felt proud of herself for raising children who were successful both academically and financially, and she was happy they were grateful and supportive of her. She noted that she had provided college studies for them (some in private universities). She was proud that she had always taken excellent care of their health by bringing them to the doctor when she noticed the first symptoms of illness:

'And I always have been like this, since they were very young the doctors congratulate me, they used to tell me very good Ms, all moms should be like you.' (Martina).

When her children were older, she had the opportunity to stop working because her workplace was closing down; she decided to not look for another job because her children were working by then. After they graduated from their degrees, they found formal and reputable jobs, providing Martina with affiliation to IMSS.

After presenting herself as a giver, and explaining how hard it had been to raise her children as a single mother, she presented herself as a receiver; she did not feel she was in a disadvantaged position or that she was a burden to her children, because she was seeing the big picture of the support interactions during her life course. Martina considered her financial status to be regular (middle-class) at the time of the interview. She lived with her two single middle-aged children, and did not have a pension since she had not worked for long enough in the formal sector. She was financially dependent on her children, and beyond seeing this financial dependency as normal for cultural reasons, as other participants did (see sub-section 7.3.1 'expectation'), Martina thought about it in terms of reciprocity. She saw the support she was receiving as part of an exchange. She considered her family to be a team, emphasising the support she had given her children during her life:

'Martina: Yeah, really we… we are a good team.
Interviewer: … Ok and are you working at the time?
Martina: No, I am. I am a homemaker 100%, the 24 hours (laughs).' (Martina).

She gave the impression that she was a stay-at-home mother who did not have to worry about finances; she cooked for her children and cleaned the house. Her case exemplifies how some Mexican and Latin-American families support the older generation and how older women accept that support in reciprocity from their children.

Participants such as Martina not feeling that they were a burden to their children could be due to the support they provided to the children earlier in life. This has been explored in other reciprocity studies (Allen and Wiles, 2013; Breheny and Stephens, 2009). Regarding reciprocity in health, a qualitative study (carried out in the UK) found that 'their [older women participants'] lives were deeply enmeshed in reciprocal health-based relations and a sense of motherhood. Such constructions of motherhood involved a personal identity of "care and health" provider. Consequently, they were more prepared to share health experiences in a reciprocal way; discussing health with family…' (Boneham and Sixsmith, 2006:277). Being a mother involves caring responsibilities, and Martina felt that those responsibilities were very hard for her as a single mother; she considered that it was fair that her children were reciprocal to her, due to the health-care she had provided earlier as well as the financial support and education.

The second participant in receipt of reciprocal support was Rosa. Her case was very different from Martina's, and she was still considered a self-sufficient woman. She was widowed with five children, and was the only participant in the study who had chosen not to ask for help from her children (other participants either had no one to ask for support or accepted support, but for Rosa, it was her choice to reject it): 'I never bother them… I do not feel good asking them' (Rosa). The reason why she did not accept financial support from her children is explained in the next section ('self-sufficiency'). However, what is interesting regarding this theme in Rosa's case is that she did receive help from a nephew. Her acceptance of financial support from him was in reciprocity for the support she had provided to him earlier in life. Rosa's sister had moved from the rural area where they lived to a big city for work when they (Rosa and her sister) were younger. Rosa stayed in the rural area and raised her sister's son for many years; he had a hearing disability. She did not feel guilty about accepting financial support from him once he got a job and moved to Saltillo, whereas she did not want to be a burden to her own children. Research into

reciprocity has shown that 'being a support receiver was acceptable if support was given by the right people for the right reasons' (Allen and Wiles, 2013:680). Thus, Rosa's nephew would be considered the right person to support her when in need, because he had received support from her in the past (as had her children). The fact that he was not her son may have influenced her decision to accept support from him, as she saw it as a way of paying a care debt (being reciprocal). She may not have viewed her own children as owing such a debt due to considering it her responsibility as a mother to support her children; it was different for her nephew.

Accepting dependence on children may be related to exchange theories on mutual reciprocity (Uehara, 1990), which is an important feature in family relationships (Breheny and Stephens, 2009). Some older women may feel that because they spent the majority of their time with their children when raising them, they were unable to work in the formal sector and obtain pensions themselves, and therefore it is appropriate to rely financially on their children for affiliation to IMSS and/or ISSSTE and/or to cover their out-of-pocket medical expenses. At the same time, children may provide support because they feel empathy (Hupcey, 1998) or as an intention to provide reciprocity to their parents, making such an exchange possible. Children's experiences and thoughts were not included in this research. However, as a reference, research carried out in California (USA) has shown that children (who were young in 1971) who shared activities with their parents provided more support to them (when the parents were older) than those who spent less time sharing activities (Silverstein *et al*., 2002). Sharing time was seen as a possible investment strategy (ibid). The motivation of children to provide social support to their parents was rooted in family experiences, ensuring long-term reciprocity (ibid). Other research on reciprocity has shown that participants may have distinct concepts in mind and manage it in different ways such as equality, shared support, mutual care and balance (Breheny and Stephens, 2009), and that 'reciprocity figures as an important social exchange' (ibid:1308).

7.3.4 Theme 4: Self-sufficiency

Being self-sufficient, in this study, related to access to and use of health-care services as well as being able to pay for out-of-pocket medical expenses. Participants who did not receive support from others, or only received minimal help, were considered self-sufficient. There were two types of self-sufficient participants:

1. Single childless women with no need for support:

These participants managed to get health-care in their own right at IMSS, either by paying annual fees for an insurance policy or by retiring from a formal job. They also covered their medical expenses using private providers (when needed), using their retirement pension, earnings from an informal job after retirement (selling goods) or an unrevealed source of financial resources. It was probably not their choice to be self-sufficient, but they had no-one else to rely on (children or spouse).

2. Widowed women who did not want help from their children:

Some of these participants needed support in accessing health-care services and others stated they did not. However, for different reasons (avoiding feeling like a burden or causing problems for their children, or because they did not have a good relationship with them) they did not ask for or accept support from their children. These participants had been dependent on others in the past, and could obtain emergency support from their children if needed.

It was found that usually healthy participants had no need to use health-care services, so they also had no need to ask for help from their family; however, good health was something temporarily in participants' lives and they were aware of possible changes in the future:

'Interviewer: What would be the reason why you don't go to SPS?...
Betty: Mmm, well, because maybe I have not had the need, maybe one day suddenly I need it and probably I would go.' (Betty).

Rosa was mentioned in the last section (reciprocity) as she had accepted help from a nephew. However, she was considered a self-sufficient participant, since the financial help she received from her nephew was minimal and because the support she had received

during her life had been very variable. She lived alone in a rural area; some of her five children lived there while others had moved to the cities. She had diabetes, hypertension, chronic pain and back problems, as well as difficulties with walking and using her arm. These problems caused her to worry, since she relied on selling food outside her house for her livelihood, a job she had done informally since she was very young (with no pension or benefits). She considered her financial situation to be bad and her medications very expensive. She received aid of about $MXN 1,170.00 (£46) every two months from a government programme for people aged 60 and above.

Rosa did not reject all kinds of support; for instance, she enjoyed companionable support, such as her nephew and other family staying overnight at her house in case she needed something, her daughter cooking for her, or her son driving her to the health-care centre in emergencies. However, she avoided receiving financial support from her children even when she had no affiliation to health-care and was sick; she avoided going to the doctor because of lack of money. The reason behind her strong sense of self-sufficiency was a desire to avoid creating problems for her children. For instance, she did not want her sons' wives to get upset/vengeful and feel that Rosa was a burden to their family because of her sons dedicating time or money to her instead of them. This mother-children relationship can be read in the context of efforts to avoid being demanding. Rosa was trying to protect her relationships with her children and their families. She had accepted (earlier in life) an affiliation to IMSS through her son (which did not cost him extra money or inconvenience). This had saved her life after an accident (the bus she was travelling on to a leisure trip crashed seven years before the interview). She also happily accepted help from charities and neighbours. Thus, Rosa knew she needed support; however, her intention to protect her children was more important to her than getting support. Would she rely on others for access to health-care if she had the possibility? Not if it caused any inconvenience to her children. She had such an opportunity and had refused to accept help recently. This is elucidated in the next extracts:

'Back then [when I had the accident] my son worked… with an engineer in a, well a line of works for men. Then he had insurance [IMSS], and because of that, I got better because the owner of the bus gave us nothing, nothing, nothing. And because of my son, they got me to Monterrey [a nearby city for treatment]… But I'm going to tell you something, I never remember anything, how was it? How did it happen? How long? I didn't know about me… but I don't go to IMSS anymore because my child doesn't have it, he quit the job.' (Rosa).

'Interviewer: If one day you need help… let's say another accident happens, or something severe such as a heart attack. Would you ask them [your children] for help? Or how would it go, where would you get medical attention?

Rosa: Well, I don't know, because right now I don't have any insurance. And he told me (the son who is in the USA) "mom, if you want I'll buy you insurance for a year" and I told him, "no my son, it would be very problematic for you." Because I come to the same point I'm telling you; women are…

Interviewer: You don't want to have a conflict with their wives, right?

Rosa: Yeah.' (Rosa).

Rosa was trying to protect her relationship with her children in her role of mother; this is in line with the literature, which states that personality and roles can be an influence on acceptance of support (Hupcey, 1998).

Another case of self-sufficiency is Samantha. She was mentioned in sub-section 7.3.1 in relation to her expecting to receive support from her spouse, but not her children. She felt proud that she had no 'need to ask for support' because she was working. She also had access to IMSS in her own right (working in the formal sector) and through being the widow of a formal worker. Moreover, she said that sadly she could not rely on her children because they did not have a good relationship, and the children did not have an adequate financial status to provide support. This is in line with the literature; a qualitative study carried out in New Zealand found that 'support receiving was resisted when associated with difficult interpersonal dynamics… it was also in tension with preferred positions of being "independent" or of needing "no support"' (Allen and Wiles, 2013:670). Social support theories indicate that 'the recipient's relationship with the provider, along with the recipient's history of supportive interactions with that provider, may influence whether or not the support is accepted' (Hupcey, 1998:1234). The fact that Samantha knew she could not rely on her children due to having bad relationships with them made her financially self-sufficient.

In addition to being self-sufficient, Samantha was also a provider to her granddaughters; she enjoyed working, which could be related to seeking high levels of satisfaction in her life. It has been found in previous research (Israel) that 'being mainly a recipient of help

from adult children is related to a lower level of life satisfaction', and this life satisfaction is important for older adults (Lowenstein *et al.,* 2007:865).

Older single childless women had fewer opportunities to access health-care through others, but they did not need them, since they were self-sufficient according to the qualitative analysis. Clara could have saved money instead of paying her own affiliation to IMSS by becoming insured through others, but raising children also involves financial costs. She did find it expensive to pay for her medical expenses and sometimes she had to go without other things in order to pay for health-care, but she did get medical attention when she needed it. Jessica, the other single childless participant, expressed that 'being alone' allowed her to organise her money to suit herself, and so she was not struggling financially in later life:

'Interviewer: How do you consider your financial situation?
Jessica: Well, good, since I am single that is why I work; for my expenses.' (Jessica).

Jessica had worked in the formal sector since she was 19 years old, and thus obtained a retirement pension. As part of her retirement benefits, she had access to IMSS for life, but had not used these services after her retirement because she preferred to go private (see sub-section 7.4.2); her socioeconomic status was medium (see Table 5, sub-section 5.7.1). She used private services every month for diabetes control (blood tests, medication and consultation). She considered this expensive (about $MXN 2,000.00-£80.00 a month), but it was a time-saving strategy that meant she had more time to work selling goods as an informal post-retirement job seeking for more income. Studies using structured dependency theory have found that in terms of economic status, pensions and savings, level of dependency can be related to occupational status during the working life of the participant (Mein *et al.,* 1998). As shown in this example, Jessica did not depend on others; her financial status was good enough to afford health-care even from private services, and due to her jobs she felt that she was self-sufficient and held decision power regarding her health options.

An interesting factor in these findings is that being self-sufficient was usually temporary within participants' life courses; their situation could change depending on their needs and

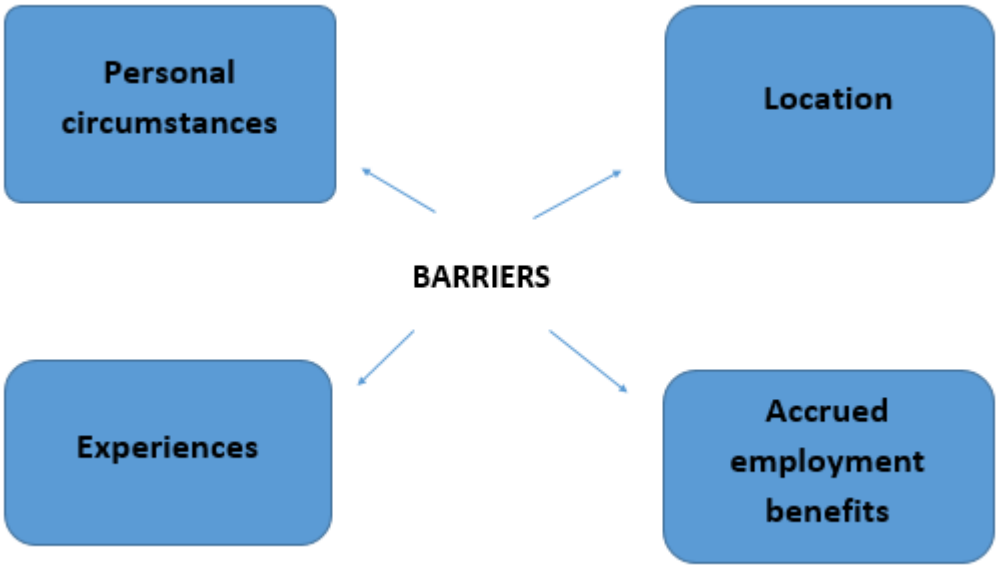
relationships with children/grandchildren. Even though Rosa and Samantha's preference was not to rely on others, they had been in positions of dependency in the past. Some participants worked to become financially self-sufficient in response to losing support from their spouses (e.g. divorce, widowhood); others alternated between being dependent and independent in relation to the circumstances of their children (e.g. employment, marital status). This was an advantage of the life course perspective adopted for this analysis.

7.4 Barriers

The second important concept for this study is 'barriers'. The aim is to use this concept to answer research questions 2 and 3. Barriers, in this thesis, refer to the factors that impede access and/or utilisation of health-care services for participants. This section intends to show the patterns found in the data in order to detect vulnerable groups and understand how it was possible for participants to overcome such barriers.

A thematic map named 'Barriers' (Figure 8) shows themes five to eight. Barriers are mentioned in relation to the four themes.

Figure 8. Second thematic map: Barriers in accessing and using health-care services



Source: Author's analysis.

Theme 5, 'Personal circumstances', provides a view of specific situations that prevented participants from accessing or using health-care services, for instance fear of travel due to previous accidents, disabilities or financial situation.

Theme 6, 'Experiences', refers specifically to bad feelings and experiences related to health-care providers' regulations or the personnel working in health-care centres and administration, which influenced participants' decisions to use health-care services from specific providers (e.g. private). Their preferences and strategies for overcoming this barrier are included in this theme.

Theme 7, 'Location', was found to be key in identifying inequalities in accessing and using health-care services. It refers to rural and urban areas and the type of health-care services provided there, as well as the way participants accessed and used such services. Distance and transport barriers are discussed under this theme.

Finally, theme 8, 'Accrued employment benefits', explores the different work benefits participants could receive, such as access to IMSS and ISSSTE and pensions. These could be obtained in the participants' own right, or through spouses and children working in the formal sector. Under this theme, comparisons are made between those who did not have such benefits or only had them temporarily and the way informal employment was a barrier to older women's access to and use of health-care services. This theme explores participants' feelings of stability or uncertainty in relation to such benefits.

7.4.1 Theme 5: Personal circumstances

The main personal circumstances that impeded access to and use of health-care services for participants were lack of knowledge about health-care services, limited financial resources (on the part of either the participant or her family), fear of travel, and disability.

Sometimes participants did not know about available services or were confused about them, and this made it difficult for them to access health-care services. For instance, the lack of knowledge that participants had about some SPS policies and services (eligibility, renewing their affiliation and health coverage) represented a barrier for them in terms of accessing these services:

'I haven't used that one [SPS]… for instance, now that I am sick … I have it. Or I know it expired. And no, no, no I don't know how it works.' (Maria).

A reason for this lack of knowledge may be the way in which some participants received their affiliation; there was a campaign, where employees working in the programme went

to people's houses to affiliate them (if they wanted to). It had not been done on the participants' own initiative. Lack of knowledge about the terms of coverage was also common among participants with SPS:

'Interviewer: If one day you get a disease such as cancer, leukaemia or blindness… where would you get attention?
Alexandra: Well... In the "popular" [SPS].
Interviewer: Would you go to "popular" [SPS]?
Alexandra: Yes.' (Alexandra).

Alexandra's answer to this particular question was noteworthy, because SPS do not cover cancer, leukaemia or blindness (Seguro Popular, 2017). However, she assumed it did, as did other participants. This means that some participants were not well informed about the basic coverage of SPS; they assumed it had larger coverage, which will have affected their plans for obtaining medical attention when in need. Since SPS is a changing system and is relatively new, it may be more common for participants to lack knowledge about it compared to other providers. Lack of knowledge about the health-care providers' policies also influenced participants' number of affiliations and negotiations of the rules (see sub-section 7.3.4).

Another personal circumstance impeding participants from using health-care services was their limited financial resources. This means that they did not have the financial resources to cover their medical expenses, or that they found these services expensive or even unaffordable. It was not surprising to find that having financial resources was a facilitator for use of health-care services, especially when all participants used or had used private health-care at some point in their lives (paying at the time of use):

'Interviewer: Is there something that could make it easier for you to access health-care services?
Betty: Well, the money.' (Betty).

Betty was a frequent user, by preference, of private health-care, even though she had access to IMSS. All participants had the option for free health-care through SPS (with limited coverage), but many chose to pay for services even though it caused them financial hardship. There was a strong need for these services and the medication they provided,

because IMSS, ISSSTE and SPS did not always have the medication the participants needed, so they had to buy it. There were also long waiting times at IMSS, ISSSTE and SPS, and private providers enabled a better quality of services. The cost of transport, especially for participants in rural areas, could be as expensive as a private consultation; thus, if there was a closer private service, participants would use it instead of IMSS, ISSSTE or SPS, which was free at the point of use but required them to pay for a taxi.

One example of the way money made a difference to participants' utilisation of health-care services and whether they overcame this barrier was Alexandra. She did not have enough money to buy her medication; thus she did not take it. As a consequence, she got very nervous and could not sleep properly. On other occasions, she had asked for support with obtaining health-care services at the government offices and they provided it. This practice is not uncommon in Coahuila, Mexico; the person will talk/send a letter to a politician and receive a cheque from the government's offices to help them solve their problem. This can happen in an informal way (e.g. a letter addressed to the Mayor). Alexandra stated that she would consider doing this again if she needed to.

Rosa also had experience of running out of medication and money at the same time. Her strategy for overcoming this barrier was to borrow some pills from her neighbour who used the same ones or to receive from American charities (once a year). When she needed consultation, she could not overcome the financial barrier, and getting financial help from her family was complicated (see sub-section 7.3.4):

'Interviewer: Have you ever thought you had a health problem but did not go to the GP? Rosa: Yes, sometimes, for instance, the day before yesterday, I was very sick. But I swear I did not go anywhere [to get medical attention] because I did not have a penny.' (Rosa).

Other participants, such as Karen, overcame this barrier by receiving financial support from their family. When she and her spouse did not have enough money to cover their medical expenses, everyone in her family supported her: 'we all pay' (Karen).

Some participants felt bad about having to make difficult decisions in terms of administrating the money for their expenses at home, medication and consultation, because they could not afford much:

'Let's say; now, if I go to consultation with a doctor, they will charge me 100 pesos [about £4] for consultation. I pay the consultation and then? How am I going to pay for the medicine?!' (Patricia).

Patricia's lack of disposable income affected her use of health-care services (private); she found it pointless going to a consultation if she was not going to be able to afford the medicine or treatment for her illness. Lack of money could be a temporary circumstance in participants' lives, and it was found that participants had to postpone visits to the doctor due to the 'lack of income' barrier:

'Interviewer: Have you ever thought you have a health problem without going to the GP?

Monica: Well, yes it happened, for a long time I stopped caring about myself. My legs hurt and I let a long time pass, I didn't get medical attention. Until now, I've been like this since December.

Interviewer: Why you did not go to the doctor before?

Monica: Because I did not have any money, I had nothing. And the child (my son living with me) works but he only gets enough money for the food.' (Monica)

Monica's financial situation was very bad; however, for personal reasons explained later, she only used private health-care services. She would have considered accepting support from her children in using medical services, but she knew that their financial situation was not good enough to help her to overcome this barrier. According to structured dependency theory, financial resources influence the experience of older adults and can also be a cause of dependency (Mein *et al.,* 1998).

Fear of travel (feeling fear or discomfort when travelling to a health-care centre due to previous accidents using buses or cars) was another personal circumstance that prevented some participants from getting health-care. This is explicated in the next extracts from Sofia's interview:

'Sometimes I feel sick and… since I had the accident I don't want to travel, I don't like it. That's the reason I don't go to Saltillo… instead, I attend the clinic here (the health centre) and they give me the service here.' (Sofia)

'Interviewer: Apart from CMR do you have another access to health-care, for instance, SPS or IMSS or ISSSTE?

Sofia: Well, my children got me affiliation, but I come back to what I said; I cannot travel because I don't like it, I get nervous about getting out' (Sofia).

Sofia tackled the 'fear of travel' barrier (using transport means) because she could use basic health-care services (CMR), at a clinic very close to her house in a rural area, as she could walk there. She was aware that she would have to travel in the case of a heart attack or accident, or when in need of outpatient and inpatient procedures or specialist services.

Rosa (mentioned above) had a combination of circumstances that acted as barriers to access and use health-care services. In addition to having financial problems, she had a disability (difficulty walking) that did not allow her to travel on a bus from the rural community where she lived to Saltillo to get medical attention (because of the unavailability of daily doctors at CMR). This increased her transportation costs, making it more difficult to use health-care services:

'Rosa: The only thing is that here [in the rural area where I live] they take me in a wheelchair, and to go there [to Saltillo] I have to pay for a van ride.
Interviewer: So, how is the transport service here? Do you use taxi, is there a bus?
Rosa: There is a bus but I can't get on.' (Rosa)

Clara had a similar problem. She had a disability (difficulty walking) due to the effects of polio, and had to use a taxi to get to Saltillo from the rural area where she lived. She usually managed it, but sometimes she preferred to use private health-care services if they were available in the rural community where she lived.

7.4.2 Theme 6: Experiences

The impact of participants' previous bad experiences were a barrier to their access to and use of health-care services. These experiences were mainly related to lack of medication and medical equipment, unavailability of services, and the personnel at IMSS, ISSSTE and SPS.

Health-care services such as IMSS, ISSSTE and SPS are committed to provide medication to patients, but do not always fulfil this commitment. Lack of available medication sometimes occurs due to a shortage or delays in deliveries to hospitals; it can also be because not all medications are included in IMSS, ISSSTE or SPS coverage. According to information from the Health Ministry, this is a national problem (Rodriguez, 2016). Participants affiliated to

IMSS felt particularly upset about it, because they had the right to free medication and expected that it would be fulfilled:

'My sister has IMSS and one has to buy the things they don't have available there… and it should not be like that, IMSS must give you everything there.' (Jessica).

'Well look, it bothers me not because I don't have it [money to pay], maybe I do, but if IMSS can give it to me and it's a service I've paid for many years, well, they are not making it easy for me.' (Laura).

The participants felt disappointed in these services. Some of them overcame the lack of medication barrier by making several trips to the health-care centre to see if the medicine had become available; others looked for it in neighbouring communities. However, these two options involved transport costs for participants. Other options were to buy it from private pharmacies or to borrow some from neighbours and friends.

Monica avoided using CMR's services; one of the reasons was the problems she had with getting her medication. This was not because of the lack of medication but instead because she could not get it due to CMR's organisation:

'Interviewer: And you say there is a lack of medication there right?

Monica: Always, always! Look, I went last week to get some [medicine] for my blood pressure and they had them but they didn't want to give me any.

Interviewer: Why do you think that was?

Monica: Because they gave me two or three months ago but in Jame (another town). And I went there [to Jame] because I was very sick but this doctor [the one close to my house] was not available, so I went there [to Jame] and they gave me [medication] for two months.' (Monica).

The way Monica overcame this barrier was to obtain the service and medication in a neighbouring community. She wanted this to be a one-time event (due to travel time and costs) but encountered problems later on; CMR gave her an illogical answer/solution that caused her disappointment, upset and frustration with their services. As a consequence, she did not use CMR services anymore; she only used private health-care. What Monica did may have been against the health-care centre's rules, possibly because they did not have control over the medication they had given her in different centres.

Long waiting times for rehabilitation services at IMSS also caused bad experiences for participants; this is evident in the next extract, from Laura's interview:

'Interviewer: How has your experience been using IMSS services?

Laura: Well, look, really, in part, I've been lucky right? Because many people say they have bad experiences right? In my case, well, the last thing. I say about five, six months ago I got an ankle fracture. And well I was one week waiting until there was a place for my surgery, and then (because it was saturated as there is a lot of people there), they didn't give me the rehabilitation. The traumatologist told me to do it myself at home. That was what I didn't consider right.

Interviewer: Do you know why that was?

Laura: Well he said that it was full. I am saying that since October. It was possible to get an appointment in January but it made no sense. He [the traumatologist] said that if I did the exercises as he told me I was going to start walking again but I think that rehabilitation was very necessary.' (Laura)

Laura felt very dissatisfied with the unavailability of the rehabilitation services she needed. A common strategy participants used when they found that services were unavailable or had long waiting times was to use private services instead. Participants did not have bad experiences accessing such health-care services. However, not all participants could afford them, and they found them expensive:

'Interviewer: How do you feel spending out-of-pocket on medical expenses?

Clara: Well it is the most expensive thing, the most expensive! One has to deprive [oneself] of other things because there is no other way, one needs it!' (Clara).

Clara felt upset about these inevitable expenses. She had affiliation to IMSS; however, she was a frequent user of private health-care, as were many other participants. Another strategy to compensate for lack of services was to make use of double/multiple affiliations (to IMSS, SPS or ISSSTE) as a second option (see sub-section 7.3.2). This allowed the participants to obtain a specific treatment when it was not available with the provider they attended in the first place.

Long waiting times were also a barrier to using health-care services, especially for those such as Jessica who worked and thus valued their time highly. Jessica had used IMSS health-care services while working formally, because she needed to prove through IMSS

that her absences from work were health-related. After she stopped working formally and received her IMSS retirement pension, she decided to use private health-care exclusively (even though she had access for life to IMSS due to being a pensioner) because she preferred to spend her time working on her small goods-selling business instead of dealing with the inconvenience she had experienced using IMSS services (long waiting times and having to go back at a later date):

'Interviewer: So, what would be the reason why you don't go to IMSS?

Jessica: Well, I started going, with this doctor and the medication it's very pricy. Since I am a pensioner I have IMSS… and yes, there the attention has been good, regular, but sometimes you go to IMSS and they take a long time and say "go back tomorrow, and come back the day after tomorrow and come back who knows when", and then every month I have to do blood tests.' (Jessica).

One of the reasons why participants preferred private health-care over IMSS was the more convenient times for using the services (they could book their appointments at times that suited them better):

'Interviewer: Is there any other reason why you prefer… private services?

Betty: Well that you waste a lot of time too [with IMSS]. That you have to wake up very early to go to consultation because you can't get there just like that: suddenly you go to see your GP, saying that you need consultation. No, you pop up and you won't get a chance. Now you [will have to] come until tomorrow and you'll have to wake up early to get the consultation.' (Betty).

As mentioned in sub-section 6.2.1, IMSS provides health-care to a large percentage of the population. Thus, the lack of services and long waiting times were expected. Martina, who was very satisfied with IMSS services, showed comprehension and patience relating to this issue:

'Martina: They [nurses at IMSS] say: comprehend we are only two [nurses] for [so many of you]… and they're right, there is a lack of a lot of personnel in IMSS' (Martina).

'Martina: Because IMSS it's more time-consuming, but it's not for… It's because there are a lot of … patients. It's not IMSS.' (Martina).

Other participants shared this point of view about the lack of available personnel resulting in long waiting times. Martina said she was 'loyal to IMSS'; unlike the rest of the

participants, she showed herself to be empathetic to the users and staff. However, she was an exception. Other participants found IMSS services to be inadequate; they were worried because there were many affiliated people and the emergency services were not fast or good:

'Sometimes they do good, sometimes they fail or something but one comes to think that it's because there are many people or I don't know why. Once, I had a pain… and my daughter took me to IMSS and we arrived at 4pm. I went to consultation and they left me there till 5am but I left with the same pain… and they had me in a very bad way, because I was supposed to be resting with my pain in bed because it did not disappear but instead we were all sitting in a room with the saline solution in a chair. That is when one says: no, well there is a need for a good service… and after that, I went to see a private doctor.' (Angela).

Angela felt very disappointed with the IMSS health-care services after her bad experience (13 hours in pain at the hospital) of not receiving adequate attention and the lack of rooms and equipment. She felt a need for a different service (faster and more adequate), which, like most of the participants, she found in the private sector. Participants also noticed that SPS had a large number of users that had increased dramatically in the last few years (see Figure 3, sub-section 4.2.4).

'More people, yes… when I started to attend, there were fewer people, now it isn't like that, we are a lot, I mean a lot of people in SPS.' (Samantha).

The experiences mentioned above with lack of medication and unavailable services led to dissatisfaction among participants with the services received. When that happened, their most common strategy was to obtain private health-care (it had certainly been used by all of them at some point of their lives). For instance, all of Monica's bad experiences had been with public health-care services she had used in the past (CMR, SPS and IMSS), which was why she preferred to use private health-care instead:

'Interviewer: What do you think of these services [CMR], when you get health-care here?

Monica: No, no, no it's not worth it. They are useless, not worth it.

Interviewer: So that is the reason you decided to go to private [health-care services] there in Saltillo right.

Monica: Yes, to Saltillo.' (Monica).

Monica was a regular user of private health-care services and was satisfied with them. The fact that she used these services exclusively was not because she had a high socioeconomic status. In fact, Monica was one of the poorest and most disadvantaged participants in the study. She did not receive any money from a pension or job; she had worked in the informal sector (agricultural) since she was 14 years old until she could not work anymore due to acute pain in her legs. After that, her children paid for her expenses; they spent about $MXN 1,500.00 (£60) a month on her consultation and medication, as well as transportation to the city since she lived in a rural area. She only trusted a private doctor in Saltillo whom she already knew and liked because they specialised in helping older adults. Her bad experiences with IMSS, CMR and SPS had a strong influence on her life and impacted on her finances:

'Interviewer: And how do you feel paying out-of-pocket medical expenses? For instance, spending from your pocket, going to the GP and paying.

Monica: No, well, I feel very bad because the little money one can save for the needs (here at home) it's gone.' (Monica).

Monica had 15 children, but only six of them were still alive. She had chronic pain, hypertension and problems with her spine and lungs (which caused her worries), and so she needed to take medication every day. She had no affiliation to health-care providers. Her children (living in Saltillo) could have provided her with access to IMSS; however, she would need to live at the same address as them to obtain the benefit, and as she did not, she could not access IMSS. Moreover, she was very sceptical about IMSS health-care services:

'Monica: I tell my children: I don't want to go to IMSS, do not affiliate me to IMSS because look I have … two sisters in law who passed away recently and a niece. It [their reason to visit the health-care centre] was not the cause of death, they were on their own, walking and they killed them there I say… It was diabetes and blood pressure … they were 65 … 52… and 47... I tell my children: do not take me there. Never!

Interviewer: Do you have any preferred provider? For instance, IMSS, ISSSTE, SPS, private health-care, which one would you like the best?

Monica: Well, I would like them [children] to get medical attention for me only with doctors… private.' (Monica).

She did not trust SPS either and related several bad experiences:

'Monica: No, if you could see all the experiences I've had and what pain they have caused me. Because they killed my two children, they killed them and a daughter… the oldest… she had a stroke. And it's like that, can you believe? What they do with our children!

Interviewer: Yes of course. Was that at the hospital?

Monica: Yes… well, one was at SPS and the other, well he could not get there because they killed him here in Arteaga [a rural community]… and well. Not anymore.' (Monica).

Monica became very sad and emotional when she talked about her children who passed away, and feared that something like that could happen to her (being given inappropriate medical attention) as she knew a lot of similar cases, mostly close family members. Monica's words above facilitate an understanding of the importance of experiences in terms of participants' access to and utilisation of health-care centres. They also enlighten the perception of the private health-care sector and its relation with participants' socioeconomic status.

Generally, private health-care met the participants' needs. This may be because they paid at the time of use, which caused them to value the services more. Paying at the time of use could also have meant that there were fewer people waiting, so they got faster services. They felt they have more decision-making power, since they had the freedom to change GP or specialist every time they wanted without giving any explanations. Therefore, there was no need to attend consultations in places where they did not like the services. Usually, participants also received a better service using private health-care. Most participants complained about the money they spent on private health-care; nevertheless, prices varied, and it was not always considered expensive. Some doctors charged as little as $MXN 30.00 (£1.50), and participants could buy generic medication in the same place, usually in pharmacies at low prices (see section 4.4).

Participants would use IMSS when in need (e.g. in emergencies) or for treatment of chronic diseases and inpatient procedures, mainly because they did not know if they would be able to afford private health-care for that, as explained by Betty and Daysi:

'Look, it's my mentality and I have told my children and I tell you that (God forbid), that if I get suddenly sick and they need to take me urgently to a clinic [private]. I tell them do not take me to IMSS. I tell them to take me to a clinic where they give me first aid and make the

analysis I really need, for them to ... to discover what I really have and then take me to IMSS because one can be admitted to the IMSS hospital and stay more than… and they don't give one proper attention.' (Betty).

'Interviewer: For instance, if one day you find out you have cancer, leukaemia or blindness what would you do in this respect?

Daysi: Well, I would go to IMSS because I have no means now… because there are no financial resources to get private medical attention for me.' (Daysi).

Betty's lack of trust in IMSS is evident in this extract, as are Betty and Daysi's preferences for private health-care. However, IMSS was a second option for them when they did not have enough financial resources to pay for private health-care. Betty was also concerned about the potentially long waiting times when needing emergency services at IMSS.

7.4.3 Theme 7: Location

Generally, participants in rural areas encountered more barriers than those in urban areas. Formal jobs (allowing access to IMSS and ISSSTE) were easier to find in urban areas, while in rural areas participants explained that the only types of jobs they or their family could get were related to farming, construction (seasonal) or selling food. These were commonly informal jobs. As a consequence, participants in rural areas, along with their spouses and children, did not receive social security (including health insurance) even if they worked. It was found that the number of children and existence of spouse was not as important as the type of job the children and spouse could get, which depended strongly on location.

Some participants living in rural areas had children who had migrated to urban areas for education or jobs, and thus had formally affiliated their mothers to IMSS or ISSSTE (often going against the IMSS requirement of an affiliated parent having to co-reside with the child). However, participants in rural areas also used CMR services, even when they had affiliation to IMSS, ISSSTE and/or SPS, because the latter were not present in the rural communities covered in the study:

'Interviewer: Ok, so besides CMR, located here, do you have any other way to access health-care services? For instance, SPS, IMSS or ISSSTE?

Sofia: Well, my children affiliated me [to IMSS and ISSSTE]…

Interviewer: Ok, you have both [affiliations] and you don't use them because they are not here in San Antonio?

Sofia: Yeah, they don't have them here.' (Sofia).

The CMR service was close to Sofia's home. It was open 24/7 and was convenient for her to use because she did not like to travel outside the town, so it saved her time and money on transport. However, the services there were limited, since it was a small health-care centre, not a hospital; there was no consultation with specialists, inpatient procedures or blood tests, among other services.

According to the literature from IMSS, there are hospitals and medical units in the rural areas of Coahuila under the programmes 'IMSS-PROSPERA' and 'IMSS-BIENESTAR' (IMSS, 2019). However, none of the participants knew that these services were available. This may have been because they were not present in the selected rural areas for this study. Moreover, according to Gabriel Orsua, the secretary of the town council, there were only four CMR venues in 2016 (Pamanes, 2016) and their purpose was to compensate for the lack of IMSS and ISSSTE in the region (ibid). This information was confirmed by the participants, since those in rural areas affiliated to IMSS had to travel to Saltillo when they wanted to use its services, as did those affiliated to ISSSTE and SPS, which took up extra time. Their strategy was to use closer private health-care services. This saved them time and money, and they encountered shorter queues, shorter trips and faster results, as explained in the next extract:

'Interviewer: Is there something that could make it easier for you, for instance, to get x-rays and medical services?

Clara: Well, the only thing I did last time: I said, here, there is a radiologist, I went and paid the same I was going to pay for the taxi, I paid to the [private] radiologist.' (Clara)

Another strategy for reducing the impact of a distance barrier was to delay medical attention until the participant's next appointment:

'Interviewer: Have you ever thought that you had a serious health problem and did not seek a doctor?

Angela: Well, yes, sometimes I hold it up; I say no I'll wait for the appointment…

Interviewer: You prefer to wait a few days to tell [the doctor] about the two things at the time?

Angela: Yes, I'd better wait.' (Angela).

Angela also revealed another disadvantage of living in a rural area: the weather. These areas were located closer to the mountains with more extreme temperatures than Saltillo, which has a dry and semi-dry climate (INEGI, 2019). Angela explained, as shown in the next extract, how this affected her use of health-care services:

'Let's say one has to wake up early to go to get the blood tests and everything and it's a problem for one to wake up very early. It's worse in winter. Here it's very cold.' (Angela).

Angela had noticed a relationship between the cold and the place where she lived. She believed that to have the services closer could help her to reduce this problem. It would also reduce her travelling time by about one hour, allowing her to sleep longer.

The sun being too hot to go out also stopped a participant in a rural area from seeking medical attention. Alexandra, who had to walk up and down a hill to access any transport means, explained that when she had come back from work, she was too tired to go out in the sun again to go to the GP. Thus, she preferred to stay home and not seek medical attention on hot days, even when she needed it. This affected her use of health-care services.

7.4.4 Theme 8: Accrued employment benefits

Work conditions that affected access to and use of health-care services were mainly the type of job (formal or informal; see section 4.2) and the length of contract held by the participant, their spouse or children. Access to IMSS or ISSSTE was not for life. As explained in section 4.2, an affiliation to IMSS or ISSSTE lasts as long as the work contract does. If the worker or pensioner passes away, the affiliation can continue for his/her dependents. This was why some participants only had access for limited periods of time. This temporality caused uncertainty among participants. For instance, Angela felt uncertain about her future access to IMSS:

'One of my daughters affiliated me to IMSS, but she is not, let's say she is not for life. No. She is for one year. Right now we don't know if she will continue, if we will continue with IMSS or not.' (Angela).

This caused Angela to worry about her medical expenses, because before her daughter got the job, Angela had needed to pay for her expensive medical costs (insulin among other medications); she was now getting them free at IMSS due to the affiliation her daughter was providing.

Karina was another disadvantaged participant who had worked in informal employment with no benefits throughout her life course. She used to live in a rural area until her husband passed away; following this, she moved to Saltillo and worked informally cleaning houses. She was not eligible for a widowhood pension, life insurance or access to IMSS or ISSSTE, because she and her husband both worked in the informal sector. At the time of the interview, she was working in the same job she had done throughout her life (cleaning houses), but for fewer hours. At the age of 73, she had no hope of obtaining a retirement pension, but she did benefit from the government aid provided for people older than 65 (see section 4.6). She kept working even when sick because she needed the money. She was an SPS user, and it was common for her to spend out-of-pocket on medication:

'Karina: I am diabetic.

Interviewer: Apart from diabetes do you have any other chronic disease?

Karina: Sometimes, it is my head, I am old …

Interviewer: Is it the memory?

Karina: I don't remember where I leave the things… when we had the accident… I hit my head a lot … it hurts a lot… and that's what I have, my wrist, my spine… I work two days in a house… and I always save so I have [money] for the pills I need...' (Karina).

Karina struggled financially, and worked even having disabilities, which made it more difficult for her. She had been involved in the same accident as Rosa and she also experienced after-effects such as chronic pain. If she had been able to access IMSS or ISSSTE at the time of the accident, she would probably have been entitled to a pension for inability to work; however, the job she had held at the time had not provided her with social security, and this caused complications for her in later life. Pensions were a key financial aid for participants, providing them with stability and peace of mind when it came to medical expenses:

'Interviewer: How do you feel about paying out-of-pocket for that medication?

Sabrina: Well, good because I have my pension.' (Sabrina).

In contrast to Sabrina, Angela (mentioned above) was in a disadvantaged position compared to other women who had obtained a pension through their spouse. She expressed feelings of frustration, explaining that she had to earn the money herself. Angela's husband did not have social security, because he worked in the informal sector in a rural area. Angela's disadvantage in terms of accessing benefits such as health-care services, a pension and life insurance when her husband passed away was related more to the work conditions of her spouse than to her marital status.

Anita's case, mentioned in sub-section 7.3.4, provides another example of the way that relevant work-related changes affected participants' access to health-care, because her life was saved by the medical attention she received at IMSS through her son when she and her sister had a car accident. However, her access was temporary, because she lost it after her son quit that job. Thus, it can be said that accrued employment benefits were a factor that influenced access to health-care at IMSS and ISSSTE for participants throughout their lives, and with that their peace of mind and financial situation. Moreover, the temporary nature of these benefits impacted greatly on participants' lives.

7.5 Summary

This chapter has presented the results of the qualitative part of the research. Two thematic maps were presented in relation to two key concepts: support and barriers. In the first part of the chapter (Support), it was explained how participants had expectations of support, especially from their spouse but also from their children. Some participants were involved in reciprocal exchanges with their children (or nephew in one case), and they felt comfortable receiving support because of the support they had provided earlier in their life course. Multiple affiliations were a way to maximise participants' benefits; however, not all participants liked the idea of having double/multiple affiliation, and not all were eligible. In relation to the self-sufficiency theme, it was found that participants had different reasons for being self-sufficient, from being proud and choosing not to ask their children for support, to not having someone to rely on or not wanting to bother their children.

Support to access health-care services, specifically IMSS and ISSSTE as a derived right was time-limited in participants' life courses. That was in part due to the need the participants' specific for support, but mainly related to policy because of the implications of formal and informal employment of the family members (spouse and/or children), which is strongly related to location factors, being disadvantaged in rural communities.

In the second part of the chapter (Barriers), participants' life experiences were analysed in order to define the barriers affecting their access to and use of health-care services. It was found that some barriers were related to participants' personal circumstances, such as limited financial resources, location (rural areas) or accrued employment benefits (temporary jobs providing temporary access).

It was found that single childless women were not necessarily disadvantaged in terms of accessing health-care services, because the two participants with these characteristics were independent women and able to access services in their own right. Moreover, they had enough resources to pay for private medical expenses if needed (basic services). The next chapter discusses both the quantitative and qualitative analyses' results in relation to the literature and concludes this thesis.

Chapter 8 Discussion and conclusion

8.1 Overview of the chapter

In the two previous chapters, the quantitative and qualitative findings were presented separately. This chapter interprets and discusses the results in relation to each of the three research questions (see section 1.5), drawing on the evidence from the bivariate and multivariate analysis of MHAS dataset as well as the results from the thematic analysis of 20 semi-structured interviews carried out in Mexico. It contextualises the findings within the existing relevant literature and discusses how the life course perspective, together with the structured dependency theory, deepened the findings of the research. It identifies the limitations of the research and comprises government policy implications as well as recommendations for further research on access to and utilisation of health-care services among older women in Mexico.

The purposes of the study were to identify and to understand better the vulnerable groups of older Mexican women when accessing and using health-care services. Of particular importance is the situation of older women whose access to health-care services is dependent on others; therefore it is important to ascertain whether there are disadvantages for those who have no family (children or spouse) to rely on and to detect barriers to accessing and using health-care services in Mexico. A further aim of this thesis was to provide evidence to inform the development of future policies that could contribute to better access and utilisation of health-care services in Mexico among older women. This, in turn, could promote equality and reduce the occurrence of barriers for older women in accessing and using health-care services.

This chapter is structured according to the research questions and attempts to give a clear answer to all of them. Research questions 1 (see section 8.2) and 2 (see section 8.3) were answered using both quantitative and qualitative data, while research question 3 (see section 8.4) was answered using qualitative data only.

8.2 How does having a spouse and/or child(ren) impact on older women's access to and use of health-care services in Mexico?

In this research, the results from the quantitative analysis have been generalised to the Mexican population of older women; this was possible due to the use of the MHAS dataset. The results from the qualitative component come from a very small part of northern Mexico (Coahuila), a state with variations in regulations pertaining to health-care compared with other states (discussed in section 8.6). Nonetheless, the qualitative findings added new perspectives related to more conceptual understandings such as policy (in regards to multiple affiliation).

Family members tend to support older adults, especially in Latin-American countries (Gomez *et al.,* 2009), and Mexican regulations promote dependency of parents on adult children. For instance, legislation in some parts of the country states that older adults should receive support and protection from their families (H. Congreso del Estado de Baja California, 2017), and IMSS and ISSSTE require a certain degree of dependency in order to approve a derived right for access to health-care (see sections 4.6 and 4.2). Thus it was expected that there would be inequalities in terms of access to and use of health-care services among older women depending on the number of children they had and their marital status. The results from this study show that there were some other and possibly more important factors, as discussed by the participants, affecting access to health-care; these included location and the employment conditions of the participants, their children and their spouses.

There have been studies acknowledging the temporality/changes in support for older adults (Smyer and Hofland, 1982; Tilburg, 1999). One of them was a longitudinal quantitative European (Dutch) study looking at the number of networks (family, friends, neighbours) and contact and instrumental support changes (Tilburg, 1999). The temporary nature of the support received was an original contribution to knowledge from this study. Findings from both the quantitative (e.g. high percentages of women affiliated as a derived right from their children, childless women having higher odds of being uninsured) and qualitative research (e.g. children and spouse as enablers to accessing and using health-care services) appear to be compatible with the existing literature presented in sub-section 3.3.4, showing that for the older cohort of older women in Mexico (born in 1937 or

before), having fewer children was associated with higher odds of being uninsured (Díaz-Venegas *et al.,* 2017), and for the younger cohort (born after 1937), not being married increased the odds of being uninsured (ibid). Marital status has been identified as a strong predisposing factor for access to and use of health-care services in other countries (see sub-section 3.2.4), and this was the case for the Mexican participants as well. Access and utilisation are two different concepts that are related to each other (see section 2.6); thus, they are discussed separately in the following sections.

8.2.1 Access

Access was defined by Andersen (see section 2.7) as a means to obtain entry into the health-care system; for this, certain requirements must be met (Andersen and Newman, 1973). As explained in Chapter 4, the regulations for access to health-care services in Mexico vary by health-care provider. In summary, the conditions for accessing health-care are that it can be gained through others (e.g. children or/and spouse) as a derived right, by paying annual fees for an affiliation (e.g. private, IMSS and SPS), through one's own formal employment or retirement plan (IMSS, ISSSTE, PEMEX, Defence, Marine or private) or through one's own right/social assistance programme (e.g. SPS, which is free for the disadvantaged population). The literature also shows that in Mexico, even though there are several ways to access health-care services, for older women access is granted mainly through avenues not associated with their work (about 50%) (INEGI, 2012), indicating that they rely on others to access health-care. The quantitative analysis found similar results (see sub-section 6.2.2): of those participants affiliated to IMSS, 73.1% were affiliated as a derived right; of those affiliated to ISSSTE, it was 61.8%; of those affiliated to PEMEX, Defence or Marine, it was 89%; and of those affiliated to a private health-care provider, it was 36.2%. Thus, the findings of the quantitative research emphasise that the percentages of older women receiving derived rights varies considerably by health-care provider. Moreover, the data showed a significantly higher percentage of participants affiliated to IMSS through their spouse (47.9%) compared to those affiliated though their children (25.2%) (see sub-section 6.2.2). The qualitative results confirmed that older women preferred to access IMSS and ISSSTE through their spouse rather than their children. This preference showed that participants knew they could obtain greater benefits (better pensions and life insurance) through their spouse rather than their children (see section

7.4), although not all participants were aware of this. In terms of women's identity, utilising derived rights from spouses was not only more beneficial (financially) but also more socially expected (see sub-section 7.3.1) than obtaining rights through children; however, for some women, obtaining access to health-care through children was expected as a reciprocal exchange. This could be a reason why the quantitative findings showed that percentages for derived rights were higher through spouses than children.

So far Mexico has been successful affiliating its population to health-care providers including SPS as a social programme and initiatives such as CMR. However, as mentioned affiliation may not guarantee access (e.g. for cancer treatments at SPS). The government seems to have noticed that and has plans to implement a non affiliation programme in the future (SPS changes). Thus, it will be interesting how this system works for Mexican older women.

Because spouses and children are enablers in terms of accessing health-care services, it was expected that participants with a spouse and/or more children could access health-care more easily than women with fewer family networks. The Mexican literature has shown (see sub-section 3.3.4) that there can be fewer opportunities for emotional and financial support if one has fewer children (Diaz-Venegas *et al.,* 2017). Surprisingly, the multi-variate analysis showed that for IMSS and ISSSTE, participants with more than four children had significantly lower odds of being affiliated compared with childless women (the reference group in the logistic regression). This could have a relationship with the fertility patterns found in the bivariate analysis, in which the smaller the area, the more children women had (the MHAS data are urban-rural representative). Moreover, in the qualitative analysis, location was found to be a very important factor in accessing health-care because of its relationship with employment: to live in a rural area implied fewer opportunities for formal employment. Instead, temporary and informal employment such as working in the fields, construction and food sales were common. These two factors have also been identified in the literature (Salgado-de Snyder and Wong, 2007). Another explanation for the result is the possibility that having more children results in less quality time spent with each child, meaning that parents do not build strong relationships with all their children and this impacts on the children's reciprocity and willingness to provide support to their parents in old age. Inability to provide education to multiple children could

also result in children having low paying jobs as adults or being in informal employment; the education of the participants' children was not studied in the quantitative analysis, but it could also be related to the location disadvantages mentioned above.

There have been studies in the UK that considered the gender of the children as a variable; they found that having at least one daughter was more relevant than the number of children, but that was related to help with instrumental activities of daily living (IADL) and activities of daily living (ADL) (Grundy and Read*,* 2012). In Mexico, in terms of affiliation to health-care, sons are expected to be the main providers as they are more likely to work in the formal sector for longer periods (see sub-section 4.2.1). There is a distinction between these two providing support; women may be seen more as carers and men as providers. However, the roles children took and the way these related to older women's access to and use of health-care services was not investigated in this study.

Existing research shows that those living in remote areas experience limited access to health-care services (Gong *et al.,* 2016: Salinas *et al., 2*010). This was in line with the qualitative analysis, since SPS, IMSS and ISSSTE facilities were not available in the rural areas of Arteaga Coahuila. While some participants had affiliation through their children/spouse to SPS or ISSSTE, they struggled to use these services because of the distance barrier.

The literature review pointed out that those who were single and divorced comprised socially and economically vulnerable groups in Mexico (Salgado-de Snyder and Wong, 2007). The multivariate analysis found that single participants had significantly higher odds of being unaffiliated compared with married participants; this was for all health-care providers, including SPS (see sub-section 6.6.4). This is an indicator of inequality and in line with the literature pertaining to these groups' vulnerability (ibid). On the other hand, among the single women with access to health-care services, 82% had affiliation in their own right (the highest percentage among the marital status subgroups). This is in line with the qualitative findings that single childless participants were independent, had enough money to cover their medical expenses and could access IMSS in their own right. A possible explanation for this could be that because they had no one to rely on and no one depending on them, they had found the time and opportunity to work, save money and obtain a pension (and thus access to health-care) during their life course (only Jessica and

Clara had not worked during their lives) (see section 8.6). This also gave them a feeling of self-sufficiency and decision-making power regarding their health. Having a spouse or/and children did influence access to health-care services for participants (excluding SPS). A spouse and children (if they worked in the formal market or received a pension) maximised participants' options; they could sometimes choose a health-care provider, or maintain two or more affiliations (even though this sometimes broke the rules about having more than one affiliation). According to the regulations of the health-care providers, there are no opportunities for childless and single women to access IMSS, ISSSTE, PEMEX, Defence or Marine as a derived right. Thus, this group would have had fewer options than participants with children and/or a spouse with certain characteristics (family working in the formal sector, a good relationship with family and willing to accept help). However, women with children and/or a spouse may have had fewer opportunities to work formally earlier in life and to access health-care in their own right later in life (e.g. mothers finding it difficult to combine work and childcare activities).

Generally, both parts of the research found strong patterns of dependency in access to health-care, especially for IMSS and ISSSTE. The qualitative findings showed that being dependent or independent was temporary in participants' life courses, which allowed a more detailed understanding of the patterns of support from spouses and children, while the quantitative findings captured one point in time. The life course perspective was an adequate approach for capturing this reality and understanding that dependency patterns are dynamic in women's lives. While enabling/predisposing factors such as number of children and existence of a spouse are not likely to change over time, family members' circumstances and their relationships with older women do change, impacting on their access and use of health-care services. To capture these findings it was important to obtain knowledge on things that changed during the participants' life course, and furthermore, the reasons why they changed, as these may be related to policy. The findings are an example of the strength of the qualitative method and the mixed-methods approach in answering this research question and providing an original contribution.

After reviewing the literature, and more specifically the affiliation policies of the different Mexican health-care providers, it was expected that the way that Mexican health-care public systems (through employment and derived rights, except for SPS and CMR) are

organised would promote dependency on a spouse or children for access to health-care services. Structured dependency theory views dependency as a socially constructed entity (in this case familialistic Mexican culture and the eligibility requirements to access health-care defined by the government). It was found in the quantitative analysis that a high proportion of older Mexican women were presumably benefiting from derived rights through spouse and/or children to access health-care in response to such policies. Moreover, the qualitative analysis found that participants were aware of such regulations (e.g. that it was possible to access health-care through derived rights), and even though some were confused by or ignored the specific regulations about multiple affiliations, they were used to the way the health-care system worked, and so saw it as a normal way to access health-care. The patterns of older women's life courses indicated that if they had worked, it had usually not been formally and/or not for long enough to be able to obtain health and economic benefits (e.g. a pension) in later life. According to the quantitative data, a high proportion of participants were dedicated to household chores as a reason for not working (especially married or cohabitating participants), and of those who did have a job during their lives, a high proportion had left it for family reasons (e.g. having children, caring activities, marriage) (Tables 14 and 15). According to the qualitative analysis, older women tended to rely financially on their spouses ('no need to work'), and those who worked mainly did so informally. Thus, structured dependency theory helps to understand the familialistic Mexican culture in combination with the policies were favouring older Mexican women to be dependent through derived rights when accessing health-care. Accessing to health-care services (affiliation) in their own right was not necessarily preferable over depending on others for access (derived rights), in fact, sometimes participants would benefit more from relying on their spouses for affiliation to health-care, especially those who stopped working to raise children and those who did not work as many as 1250 weeks in order to access a pension, but their husbands did so they could still access to a widowhood pension in later life.

The Mexican health-care system works in a fragmented way; formal employment has a pronounced association with social security and thus with access to health-care to IMSS and ISSSTE among others. The derived rights policy favours a familialistic system in which adult children help their parents. However, the system may be failing by assuming children

will affiliate their parents if needed, because it does not take into account other factors such as bad relationships between mothers and children, desire for self-sufficiency (e.g. Samantha) or mothers not wanting to feel a burden (e.g. Rosa). For such cases, the system provides other options such as SPS, private health-care and government initiatives (e.g. CMR); however, these options are not equal, and do not provide the same benefits as IMSS or ISSSTE in terms of availability and quality of services. Structured dependency theory helps to emphasise the inequalities older women experienced earlier in their lives (e.g. having children, a spouse and/or employment) and to link them to policies such as derived rights to access health-care and pensions.

The situation of older women in Coahuila, Mexico, where the qualitative part of the research was carried out, was in line with the literature; the older women's life course was explored and the pattern confirmed the findings reported by Wong (2007) showing that mothers generally dedicated years of their lives to taking care of their children and either did not work or worked informally. Thus, in later life, they were generally dependent on others for access to health-care. Being in a position of dependency could be perceived as something negative, but also as something positive (e.g. Martina saw it as a return on their years of child-raising).

8.2.2 Utilisation

There were several ways in which participants benefited from a spouse and/or children when using health-care services. Both the quantitative and qualitative data found that the financial support provided by children was a strong factor impacting on the utilisation of health-care services for older women in Mexico, even though utilisation was free at the point of use with an affiliation to IMSS, ISSSTE or SPS. The quantitative findings indicated that more than half of the participants who did not visit a doctor when they had health concerns made this choice because they did not have money (see sub-section 6.2.5). Explanations for this could be related to a strong preference for private health-care or transport barriers related to income. In the bivariate analysis, it was found that childless women generally had poorer utilisation than women with children, and they also reported higher percentages of poor financial situations (see Table 13, sub-section 6.4.1). Moreover, participants whose children paid for their out-of-pocket medical expenses (e.g. medication or consultation when it was not available at health-care providers) had significantly higher

odds of visiting a doctor (multivariate analysis, see sub-section 6.6.5). Thus, even when services were free at the point of use at IMSS, ISSSTE and SPS, financial support from children was important for participants when using health-care services. According to the qualitative findings, the financial support to use health-care services was needed not only for affiliation to a health-care provider (e.g. Rosa), but also for other expenses such as transportation and medication, which sometimes prevented participants from using health-care services. Some participants benefited from financial support from their children and spouse when accessing and using health-care services.

Utilisation of private providers was commonly paid for at the time of use (not by affiliation), and it was quite common for participants to prefer to use such services because of services being unavailable at IMSS or ISSSTE, a lack of trust in the latter, and the faster and more convenient service offered by the private sector. This is in line with previous qualitative research, which found that the public health-care system does not meet older women's needs (CONEVAL, 2014; Makita, 2012). The literature review showed that income is an enabling factor for accessing and using health-care services (see sub-section 3.3.1), especially in countries with highly privatised health-care systems such as Mexico. Moreover, the literature has recognised the private health-care sector as an alternative to IMSS, ISSSTE and SPS and explained that it is highly common for Mexicans to have out-of-pocket medical expenses (Maurer, 2008; OECD, 2017) (see sections 4.4 and 4.5).

Apart from financial support, there were other ways in which having a spouse and/or children influenced participants' utilisation of health-care services. According to the qualitative analysis, participants received company, advice and support with daily life activities, among other things, which helped them to use health-care services.

To answer this question, it can be said that spouses and children were definitely enablers in using health-care services; however, they were not essential due to government social assistance programmes such as SPS, and also because single and childless women could access health-care in their own right (e.g. by working in the formal sector). Single and childless participants were disadvantaged groups in the quantitative analysis but not in the qualitative one; a reason for this could be the differences in location relating to state and culture, which could not be measured in this research. In the north of Mexico, women

have higher rates of education and literacy, which may give them more opportunities to work and greater economic potential; levels of poverty are higher in the south (INEGI, 2017). The results from the MHAS data reflect general information from the country, while the results from the qualitative analysis reflect very specific information from small areas in the north of Mexico. This is discussed below in section 8.6.

An original contribution to knowledge and a noteworthy finding while analysing the data to answer this specific research question was the temporality of the support provided by children and/or a spouse. Such temporality was influenced not only by relationships (e.g. married or divorced) but also by the enabler's employment (change or loss of job), among other factors.

8.3 What are the barriers older Mexican women face in gaining access to and using health-care services? And how can they overcome them?

This research question was meant to be not only descriptive but also explorative. Like the previous question, it is answered using both, quantitative and qualitative data. However, the information from MHAS on this topic was very limited, as it was based on data pertaining to reasons for not visiting a doctor with a serious health problem in the last two years derived from a multiple-choice question asked to participants who underutilised health-care services in Mexico. Participants had five options for the answer (see Appendix C), representing the following barriers: financial, lack of trust in doctors, long time needed to travel to health-care centres, avoiding bothering anyone, and fear of diagnosis. It was mainly the qualitative analysis that detected the access (e.g. the lack of knowledge and documentation) and utilisation barriers, because it provided an opportunity to study this theme in depth. It also explored whether participants overcame these barriers and how they did so, and it covered not only utilisation but also access barriers.

Generally, the barriers participants faced (according to both the qualitative and quantitative findings), grouped according to Andersen's behavioural model, were as follows. Predisposing factors: lack of knowledge about regulations and services and overly cold or overly hot weather. Enabling factors: avoiding bothering other people; long travelling distance to health-care centres; lack of documentation to prove affiliation to a health-care provider (one or several documents missing such as ID or proof of address);

lack of companion (participants preferred not to go to the doctor if there was no one to accompany them); limited financial resources; lack of transport or transport means being too expensive; unavailable services at the health-care centres; long waiting times; inconvenient opening times (having to wake up very early). Need factors: lack of trust in doctors; fear of diagnosis; dissatisfaction with the services provided by SPS, IMSS or ISSSTE; difficulties caused by disability (being unable to travel by public transport or walk to get to health-care centres); and fear of travel. The implications of some of the most important issues are expanded on here.

As the literature explains (see section 2.7), universal access to health-care entails overcoming barriers (Ravindran, 2012); there are positive effects from removing/reducing financial barriers, making it more equal for people to use health-care services (Broyles *et al.,* 1983; Chappell and Penning, 1996; McDonald *et al.,* 1973) (see sub-sections 3.3.3 and 3.3.2). In Mexico, in addition to the introduction of SPS, the Mexican health-care providers have started to interchange services among themselves in order to compensate users for unavailability of services/equipment (Rodriguez, 2017). This is another step the country is taking towards reducing macro-level barriers and achieving universalisation of health-care services; it requires insurers to cooperate in order to provide access to the population in a way that the actual regulations do not yet facilitate (receiving health-care from a different provider than the one affiliated). However, according to the quantitative data, 7% of older women were unaffiliated (see sub-section 8.4.1); according to the qualitative analysis, women sometimes did not want to affiliate, or faced distance barriers relating to non-affiliation. Structured dependency theory helps to understand, at the macro level of analysis, how even though Mexico has made efforts to universalise health-care services by creating SPS, there are still inequalities, and older women still face barriers in accessing health-care services.

Another barrier to accessing health-care services from IMSS and ISSSTE was the requirement for affiliation (see sub-section 4.2.2). Participants sometimes did not meet the requirements to access a specific provider. The way they overcame this was to ignore or work around the provider's access rules and thus getting access and that way maximise their options (see sub-section 7.3.2); this was quite common.

An assumption made at the beginning of this research was that there would be a lack of knowledge regarding SPS (eligibility, renewing affiliation and health coverage), since it is a changing and relatively new system. This was confirmed. According to the literature, in order to evaluate their options and use health-care services, older adults need to have information (Jacobs-Lawson *et al.,* 2007). For instance, the participants could have chosen wisely by selecting a health-care provider with larger coverage, which would give them more benefits if they could access it. This could only be confirmed by the qualitative data. However, inopportunely for this research, there were no participants with diseases that were not included in SPS coverage, meaning that their knowledge about their options and choices could not be evaluated. When asking participants what options they would use if they developed any of these diseases, it was found that some were not well informed about the basic coverage of SPS and assumed it had larger coverage. Since SPS is a changing system and relatively new, such a lack of knowledge was common.

One of the most important findings in relation to barriers was that they varied according to the area participants lived in (rural-urban); participants in rural areas faced more barriers, not only relating to distance and transportation (as expected) but also to affiliation to IMSS and/or ISSSTE. This was due to the prevalence of informal employment with no benefits in these places (see sub-sections 7.4.3 and 7.4.4) and the lack of IMSS, ISSSTE and SPS facilities in rural areas. The literature showed that there may be greater access to health-care services in urban areas, while rural areas suffer from distance and transportation barriers (see sub-section 3.2.7). The quantitative results were similar regarding self-rated health in rural areas, with higher percentages of poor (20.9%) or fair (17%) health and very low percentages of very good and excellent health (4.4%) (see sub-section 6.5.1). Social assistance programmes focusing on tackling transportation barriers for older adults have been carried out in Mexico; these include 'Caravanas de la Salud', a programme in which vans (mobile medical units) travel to remote communities that are difficult to access with the aim of providing health-care services (Secretaria de Salud, Gobierno de Baja California Sur, 2016). Another programme in Mexico is the National Institute for Older Adults discount card, used by adults over 60 years old to obtain discounts when using public transport or buying travel tickets (INAPAM, 2016). Participants in the qualitative research added to the list of initiatives by mentioning the mobilisation of equipment to rural areas

in order to provide them with blood tests, X-rays and other services; the CMR services, which were of great benefit for participants and compensated for the lack of presence of other providers; and charities from other countries providing free medication.

The quantitative analysis found that about 10% of participants had faced utilisation barriers and had not overcome them. They were asked: 'In the last two years, have you ever thought that you had a serious health problem but did not go to the doctor?' and could answer one or more of the five options given. The 10% only comprised participants who had not overcome such barriers during a certain period of time (the last two years). However, the data provided valuable information, such as the fact that financial barriers (not having financial resources to cover medical expenses, or finding these services expensive or unaffordable) had been faced by half of the participants who had not seen a doctor when they had a serious health concern. The qualitative analysis found that financial hardship was very common among participants; this was linked to satisfaction with IMSS, ISSSTE and SPS health-care services and the widely used private health-care sector in Mexico.

A macro-level barrier can occur when the costs of health-care services are expensive and the population in general struggle to afford them (cost barrier). A micro-level barrier can occur when the financial situation of a particular patient is crucial and they cannot afford health-care services (financial barrier). Both analyses (quantitative and qualitative) focused on the micro-level barrier, since the Mexican private health-care is very wide and provides options to different groups (see sections 4.4 and 4.5), and its services are generally affordable (except for inpatient procedures). For inpatient procedures, participants (qualitative) encountered cost barriers to access private health-care, which in many cases could be overcome by using SPS services or IMSS/ISSSTE (if affiliated); this is in line with previous research from CONVEVAL (2014). The life course perspective helps to understand that barriers were temporary in participants' lives, with some exceptions such as disabilities since birth (e.g. Clara) or location.

A strength of the mixed-methods approach in this research was that while the quantitative analysis focused on barriers mainly relating to participants' circumstances and beliefs, the qualitative analysis went further and investigated barriers relating to health-care providers. These barriers (e.g. unavailable services and long waiting times causing dissatisfaction)

were probably stronger than those related to participants' circumstances, and so are worth discussing further on a macro level. The personal experiences of the participants and/or their children and spouses, as well as factors such as formal-informal employment, their benefits and their location (urban-rural), were key to detecting these kinds of barriers.

The barriers relating to health-care providers were explored in sub-section 7.4.2. These were related to the lack of medication and medical equipment, the unavailability of services and the personnel at IMSS, ISSSTE and SPS. Some of these, such as lack of medication, are already considered a national problem according to the Health Ministry (Rodriguez, 2016). Thus, the results are in line with the literature, which has shown that the Mexican health-care system does not satisfy older women's needs (CONEVAL, 2014; Makita, 2012), and as a consequence, they face barriers when using health-care services. The way participants overcame these barriers was mainly by using private health-care services, which affected their finances; this is linked to the financial barriers (mentioned earlier).

Throughout the literature, family members (children and spouse) were presented as enablers facilitating access to and use of health-care services (Andersen, 1995; Beyeler *et al.,* 2015; Duggleby *et al.,* 2004). In the USA, relying financially on family members is a common way to overcome barriers (Duggleby *et al.,* 2004; Goins *et al.,* 2005); the situation is similar in Mexico according to this research. Family support was confirmed by the qualitative analysis to be key in helping participants to overcome barriers; it was possible to study this aspect by using the life course perspective, which considers several spheres of life such as family dimensions over time (Victor, 2005). Thus, instead of researching a single point in time during which the participant may not have received support from her family, the analysis went further by investigating the times in her life when she had received support, the reasons why she had stopped receiving support, and/or her plans for receiving support in the future, giving consideration to other factors that were variable along her life course (e.g. disease, financial situation, age).

In summary, to answer this research question, the barriers were related to the location and work opportunities of the participant, her spouse and/or her children during their life course. The use of private health-care services was crucial for overcoming these barriers.

8.4 What has been the experience of older women in Mexico of gaining access to and using health-care services since the introduction of SPS?

This section discusses the key findings of this thesis in relation to the above research question, which was designed to be answered by the qualitative results alone. The reason for this is that the MHAS dataset did not contain information about older women's experiences of accessing and using health-care services. However, the statistics about health-care providers and users did contain relevant information about research participants' experiences. This question was addressed on a micro level using the life course perspective (see section 2.2).

The main health-care reform affecting older women's access to and use of health-care services in Mexico was the introduction of SPS in 2002-2003. This reform enabled disadvantaged groups to access health-care services. It involved organisational challenges in the system; new policies were introduced, which have been changing over the last few years (e.g. coverage). SPS was designed as a step in terms of promoting equality and aiming for the universalisation of health-care services in Mexico. Other researchers studying SPS have found increased utilisation of health-care services when evaluating the efficacy of the programme; their results indicated higher levels of prevention screening, blood tests and vaccinations (Pagán *et al.,* 2007; Salinas, 2015) (see sub-section 4.2.4). However, its services in terms of accessibility, acceptability, utilisation and out-of-pocket medical expenses (Table 2) have been rated worse than other health-care providers (CONEVAL, 2014). Experience affects perception, and the results of the qualitative analysis were in line with the literature, indicating that previous negative experiences such as long waiting times for a medical appointment, inaccurate diagnoses, and short opening times for health centres create a lack of confidence in receiving health-care (Wendt *et al.,* 2012). It was common to have bad experiences using SPS, as well as IMSS and ISSSTE health-care services. This was reflected by a lack of trust on the part of participants in the health system, a strong preference for private health-care (as well as for a faster service) and attempts to combine SPS with other affiliations (e.g. IMSS and SPS).

Previous research has reported a dramatic increase in the SPS-insured population year by year (INEGI, 2017; Pagán *et al.,* 2007), but not in the number of nurses, doctors, beds or health-care centres (see sub-section 4.2.4). Thus, it was expected that this study would

find that the experiences of participants using SPS had been negative, affecting their utilisation of health-care services. In the qualitative analysis, participants noticed there had been an increase in affiliated people over time; they also noticed this increase in other providers such as IMSS (see sub-section 7.3.2). While some were disappointed and did not trust the services, some took advantage of the possibility of obtaining double affiliation in order to maximise their options for treatment, combining SPS with IMSS and CMR. This was not allowed, but some participants had found ways to do it. This was consistent with the quantitative part of the research, which indicated that about 15% of older women had more than one affiliation, mainly combining IMSS with SPS and ISSSTE (see sub-section 6.2.3). Affiliation to SPS is discussed further in the next sub-section.

8.4.1 Older women affiliated to SPS

The quantitative results were surprising; 7% of participants were unaffiliated to any health-care provider, even though SPS was designed to provide coverage to disadvantaged groups and there are no employment requirements to affiliate. One reason could be that the respondents did not yet need to use the services. It was not common to find older women who were planning for their health-care in advance; this could be a cultural aspect that needs to be explored further. Moreover, SPS needs to be renewed every year, and some people may not renew it if it is not needed, especially if it generates a cost. Some participants were unsure whether they were affiliated to SPS or not, while others had forgotten to renew their SPS policy or did not know how to do so (e.g. Maria and Rosa). This may be due to the way in which they obtained their first affiliation (personnel working for the programme had visited their homes and offered them affiliation to SPS). The barriers that have possibly been caused by people not knowing about the SPS requirement to re-affiliate every year may disappear following the introduction of INSABI in 2020, in which affiliation is not necessary (Seguro Popular, 2021).

8.4.2 Regional medical health-care centres (CMR)

The existence of CMR in rural areas was appreciated by participants who had good experiences using it (all except Monica). This initiative, set up by the government of Arteaga, Coahuila, is only available in rural areas. Affiliation is not necessary, which makes it easier for participants to access and use. Compared with SPS, it serves much smaller groups (four rural communities) and provides only basic services (no inpatient procedures

or specialist services). It compensates for the lack of IMSS, ISSSTE and SPS facilities in the rural areas where the data collection took place. However, more organisation and communication among CMR clinics is necessary to provide better experiences for participants (e.g. provision of medication).

8.4.3 Other health-care providers

As mentioned in the last few sections, lack of medication, lack of services and long waiting times for services provided by IMSS, SPS and SPS were very common, and participants felt disappointed and upset because it caused them to spend out-of-pocket on medical expenses.

Participants' experiences using private health-care providers were usually very good. As mentioned previously, they paid for these services at the point of use (no affiliation). The sector had a large range of prices for the population as well as convenient locations (e.g. basic medical attention in pharmacies and availability in some rural areas). Participants could change provider easily if they were not satisfied with a service. For some participants, outpatient and inpatient procedures at private providers were expensive or even unaffordable, and so they went to IMSS, ISSSTE or SPS for these procedures; for other services, they generally preferred to use private health-care.

To answer this research question, it should be said that the experiences participants had when using and accessing health-care services in Mexico varied by provider. The results showed bad experiences using IMSS and SPS but good experiences using private health-care services.

8.5 Policy implications

The promotion of better health in later life is a key government policy concern; globally, governments are trying to provide more efficient health-care to their population, which represents a challenge. Policies can contribute to support those most in need and promote equality. This thesis has enabled an understanding of the main health-care providers in Mexico, as well as older women's experiences. After conducting this analysis, it was possible to identify the main disadvantaged groups (single/childless women and rural inhabitants) amongst older women in Mexico, who faced barriers in accessing and using

health-care services. Some inequalities were identified, as well as areas of opportunity to provide better health-care services for older Mexican women.

Discussion of health insurance (affiliation) is relevant in terms of policy, because governments and providers make decisions about eligibility requirements for subsidies, affiliation to health-care services and the costs of these services. These decisions affect people's ability to access health-care services and the implications for the poor, women, older adults and the working population, among other subgroups.

For Mexico, it is a challenge to provide efficient health-care to the population; according to the literature, organisation is important for health-care providers, as it allows them to deliver a higher quality and value in their services (Schoen *et al.,* 2007). Other research has proposed a reorganisation of the health-care providers in order to provide the right to health for Mexicans as stated in the constitution (Mercedes *et al*., 2013). The Mexican government aims to universalise health-care in the future, and it has taken some steps towards achieving this goal, including the creation of SPS (2002-2003). Moreover, because of the change of government in 2019, there are upcoming changes that will be made in the health-care system (see sub-section 8.5.3).

8.5.1 IMSS and ISSSTE access requirements through children

Structured dependency theory focuses on the role and action of the government. In this case, the health-care providers regulated by the government, such as IMSS and ISSSTE, promote dependency on family members for the older population in terms of access to health-care, while SPS does not promote this dependency. These two opposing and competing policies have an effect on inequalities in access to health-care services, but are part of a slow change the government is making in order to provide universal health-care to the Mexican population. Collaboration between the providers has already taken place; in addition, initiatives such as 'IMSS Oportunidades'-'IMSS Prospera' and the plans to merge SPS and IMSS in the future are indicators of the universalisation plan.

As mentioned in section 8.3, a strong barrier to accessing health-care services through IMSS and ISSSTE was the requirement of economic dependence on the child (ISSSTE) and co-residence with the child (IMSS) to gain affiliation as derived right to children. These regulations promote dependency on children and signpost a disadvantage for childless

participants. According to the qualitative analysis, some participants needed to obtain affiliation though their children, but they still wanted to maintain their independence by living alone. They responded to this dilemma in different ways. Some participants followed the rules and did not obtain affiliation as a derived right because they did not have the same address as their children in their ID, while others (e.g. Anita) moved to their children's house and obtained affiliation through them. Others broke the rules by claiming a derived right to health-care services despite living alone or with someone other than the entitled child (e.g. other children). This shows that there is a need for affiliation even when older parents do not live with their children. These differences show that there are inequalities in accessing IMSS if the rules are not followed properly. A similar scenario could occur due to the requirement of depending financially on a child in order to access ISSSTE health-care services. Older women are able to work around this rule, which promotes financial dependence on children. Research has also shown a preference among older Mexican women to live in their own homes (Varley and Blasco, 2000). Globally, policy recommendations have promoted older adults' independence in order to improve their wellbeing:

'Autonomy has been repeatedly identified by older adults as a core component of their well-being and has a powerful influence on their dignity, integrity, freedom and independence. Older adults have the right to make choices and take control over a range of issues, including where they live... Nevertheless, many older adults – particularly women – do not yet enjoy these opportunities across the life course.' (WHO, 2017).

Thus, the Mexican rules (IMSS and ISSSTE) promoting dependency on children and/or a spouse made it more difficult for participants to access health-care; while SPS does not have the same policies, the proportion of older women who access and prefer IMSS and ISSSTE services is important due to the increased benefits they can get by using these providers. Thus, the policy recommendation for IMSS and ISSSTE is to remove the cohabitation and financial dependence as requirements for deriving rights from children to parents.

Since IMSS and ISSSTE include health-care in their social security, using the financial contributions of formal workers, they have larger health coverage, benefits and services, which are exclusive to formal workers and their families; the general population cannot

access them (unless they pay an annual fee to IMSS). Two factors were found to cause inequalities in accessing health-care services: location and work conditions. Older women in rural areas represent a vulnerable group due to the informality of the work there; this is discussed in the next section.

8.5.2 Formal and informal work

The results showed that there were inequalities resulting from the informal employment of participants and their families. Over their life course, participants' work decisions affected their access to health-care at IMSS and ISSSTE in later life. Even if they, their children and/or their spouse worked, if they did so informally then they could not obtain affiliation to IMSS or ISSSTE or the benefits offered by these services (e.g. pension or life insurance). This is a situation that affects everyone in rural areas, not just women.

As discussed in the literature, women are overrepresented in the informal job market (Salgado-de Snyder and Wong, 2007) due to events in their life course such as maternity and the types of employment they can get (e.g. selling food or cleaning) due to low education. This was supported by the quantitative results, which showed that among the 17.7% of working older women, only 2.1% had access to health-care services through their employment, indicating a large percentage of informally working older women. The qualitative analysis also found that participants tended to work in informal employment, especially in rural areas (e.g. Karina, Monica, Angela and Rosa), and that suspending their work for some years, affected their access to pensions and health-care access to IMSS (e.g. Martina).

The lack of formality of employment affected not only the older women's jobs but also their children and spouses' jobs because it impeded the former from accessing health-care services as a derived right even when the latter were working.

The Mexican health-care system has been supporting two opposing policies (access through formal work and aim towards universalisation of health-care through SPS). In order for the first to work, inclusion of rural and temporary employment in the formal sector is necessary so that informal workers and their families will be able to access the same benefits as other workers. Rural workers sometimes do not have the choice between formal or informal employment and that leads to inequalities in accessing specifically IMSS

and ISSSTE health-care services. It would be worth analysing the changes of formal and informal employment in urban and rural areas through recent decades because this could apply to younger cohorts of the population who are still working informally in rural areas of Mexico (men and women). Stricter regulations for formalising such employment and for employers to affiliate their employees to social security institutions such as IMSS and ISSSTE are required. One reason why some employers do not affiliate their employees to IMSS is that they would have to pay fees to IMSS, and that workers would also have rights such as holidays, sick days and maternity leave, which would cause inconvenience for the employer. In terms of the second policy, strengthening SPS in order to achieve universalisation of health-care services is necessary.

The creation of SPS and CMR have contributed to minimising this access barrier, because employment is not a requirement to access these providers' services; however, SPS does not have a presence in all rural areas and CMR and SPS health coverages are limited compared with other providers. A good improvement on the part of SPS is that it has increased its coverage over the years (Parker *et al.,* 2018).

8.5.3 Health-care providers' future changes

According to the World Health Organisation, 'A transformation is needed in the way that health systems are designed to ensure affordable access to integrated services that are centred on the needs and rights of older people' (WHO, 2016:14). This may require changes in the organisation of health-care services according to the action plan on ageing and health (ibid).

The findings of this thesis are useful for informing national policies about the way actual programmes would be better targeted at older women. In order to reduce the barriers faced by participants such as the lack of knowledge about health-care services, this research recommends that providers disseminate accessible, clear, understandable and available information about the health coverage they provide and the dates of expiration of their insurance policies. This could be done online, displayed on key sites (e.g. affiliation offices) or as a hand-out document so that older women could make informed decisions and plan for future utilisation based on their needs. This is proposed in relation to the possible reasons why participants were not affiliated to SPS (see sub-section 8.4.1), such as lack of knowledge about its new policies (e.g. needing to be renewed every year),

forgetting to renew an SPS policy or not knowing how to do it (Maria and Rosa). Clearer information would also tackle the problem of multiple affiliations, since some participants were not sure if it was allowed or not and were affiliated to several providers. Moreover, one participant could have maximised her benefits at IMSS, but because of a lack of knowledge about its policies, she decided not to do so.

There have been changes in the structure of health-care providers as the Mexican government has taken steps towards universalisation of health-care services. Moreover, there has been a change of governing party, who may wish to change the policies of the previous government. According to the news after the change of government (2019), the new presidency proposed a change of name of SPS (Animalpolitico, 2018; NotimexTV, 2018, 1:04). Changing the name of a government programme is a common strategy in Mexico, as it means the incumbent government will get credit for any improvements made. Older women might not be as familiar as younger people (e.g. those of working age) with policies, new health-care providers and changes in the system and its regulations. Some participants in the qualitative analysis were confused about providers' names and affiliation requirements. Some of them did not know there was health-care coverage and that it varied by provider. Thus, another policy recommendation regarding changes in the system would be to keep the health programmes' names (e.g. SPS/INSABI) intact in order to avoid confusion among older adults regarding their rights. It is important to eliminate barriers to accessing and using health-care services. However, changes in public policies can sometimes reinstate such barriers (Evashwick *et al.,* 1984). Thus, retaining a clear programme/health-care provider name instead of changing it frequently (for political parties' benefit) could be a good strategy, combined with the provision of clear available information about health-care coverage, insurance policy dates of expiration, and ways to renew affiliation. This could help to reduce barriers in accessing and using health-care services in Mexico.

There has also been recent press information from Toribio (2018) about the possibility of IMSS gradually (by state) absorbing SPS. Other gradual changes have been announced, such as the incorporation of six of the 32 states every six months into new policy areas (such as a new health-care system) (Animalpolitico, 2018; NotimexTV, 2018, 1:04). There

have also been proposals to universalise the emergency services supplied by IMSS and ISSSTE to the population in general (NotimexTV, 2018, 1:04), among others.

The acknowledged problem with lack of medication (NotimexTV, 2019, 2:15) has been tackled in the last few years (Sanchez, 2015). Including all types of medication in the health-care centres (coverage) and making them available, as has been proposed by the government in turn (Animalpolitico, 2018), it would reduce utilisation barriers for older women, since one of the reasons presented in the qualitative results for not using IMSS, ISSSTE and SPS health-care services was the lack of medication. IMSS already has a programme in which patients can collect their prescription from participating pharmacies when it is not available at their health-care centre (IMSS, 2019); information about this programme is online and easy to access, but only for those who have internet access. The programme tackles the lack of medication barrier, but unfortunately is only available in five Mexican cities (none of them in the north of Mexico) (ibid). A similar initiative was carried out with ISSSTE in 2013-2018 (IMSS, 2015), but research showed that about 25% of patients were getting none or only one of the medicines they needed, and the programme was costing economic resources for ISSSTE that were increasing year by year and going to the private sector (Sanchez, 2015).

8.5.4 Other recommendations

The percentage of older women affiliated to more than one health-care provider (about 15%) was more than double than those with no affiliation at all (7%). This could be an indicator of inequality in access to health-care services; however, according to the regulations, those who have no affiliation at all can still affiliate to SPS if wanted. As mentioned before, possible reasons for the non-affiliation could be the lack of presence of SPS facilities in many rural areas, participants not needing the services, or a lack of planning for their future health-care options. Older adults may feel it is not worth affiliating to a provider they are unlikely to use, especially if they have to renew their affiliation every year, which sometimes generates a renewal cost. Expansion of SPS to the rural areas is recommended. Moreover, the CMR programme has been shown to be very well accepted and frequently used by participants; more research on the way this programme has succeeded in rural areas is also recommended in order to ascertain if it is worth strengthening CMR-type programmes, SPS or both.

Another recommendation for rural areas would be to keep and promote initiatives such as 'Caravanas de la Salud' (see sub-section 3.3.5), as well as visits by X-rays specialists and provision of blood tests in rural communities, since the participants benefited from those. Programmes like these tackle the issues of transportation, distance and financial barriers for participants in rural areas.

Better communication between providers in order to detect double or multiple affiliations would contribute to greater control and organisation, but it would not tackle barriers in access to health-care services for older women. Moreover, participants benefited from having more than one affiliation, since it gave them more options to obtain suitable health-care for their needs. However, improved communication and organisation within the same provider could have benefits for older women. For instance, with CMR, since services are not available every day in all rural communities, it could be convenient to share records of medication provision and consultation via a computer system. As a consequence, patients such as Monica (see sub-section 7.4.2) could go to a neighbouring community to seek health-care services and medication when needed without losing any rights within their community health-care centre in the future. This would tackle utilisation barriers and give the option to older women of obtaining health-care services somewhere else if needed. Another advantage of improving communication and organisation in health-care providers would be the reduction in waiting times; this would require more staff and resources, but it would also reduce utilisation barriers. It is necessary to tackle the lack of medication problem and to provide shorter waiting times for patients when they use the health-care services at the providers to which they are affiliated (SPS, IMSS or ISSSTE), otherwise there is a chance that participants will still prefer to use private health-care, causing them financial hardship.

Regarding the success of SPS, other researchers have emphasised its coverage and need to reform in order to provide economic resources as essential factors that challenge this success (Mercedes *et al.,* 2013).

8.6 Limitations of the research

Throughout this thesis, several limitations of the research have been identified. Some of these were discussed in section 5.8: limitations of the secondary dataset (unavailable

information); limitations of the quantitative analysis (it could not be analysed by state or city); and limitations of the qualitative analysis (data could not be collected in remote locations e.g. north and south of the country). Sampling and translation limitations were also discussed.

One reason why there were differences between the two sets of findings could be the fact that the health-care providers included in the qualitative analysis did not match those in the quantitative part; users of PEMEX, Defence or Marine services were not included in the qualitative study because there was a small percentage of participants affiliated to these health-care providers within the country (2.5%) and it would be difficult to find them, especially in rural areas. However, a strength of the qualitative data was that other providers came up in the analysis, such as CMR, which was only present only in some rural areas of Coahuila due to comprising 'Medical Clinics for the Region' ('Consultorios Medicos Regionales').

Another limitation of the qualitative analysis was that since only two participants were childless and single and one of them did not reveal her source of income, these older Mexican women have been presented in a more advantageous situation than in the findings of the quantitative analysis. Two women represented this group. It is possible that Clara, one of the single childless women, was receiving economic support from her family but did not want to reveal this because her sister was present during the interview; she expressed feelings of worrying about safety when talking about money. For this reason, Clara's sister refused to participate in the interview, and it was likely that Clara did not feel comfortable enough to talk about the support she received from her sister or other family members. It is quite common in Mexico to be reluctant to share financial information with researchers (Noticias Canal 10, 2014 0:39) due to fear of scams, insecurity, robbery and privacy, among others. The results from the analysis show that Clara was an independent self-sufficient woman; however, based on observations, there could be more to investigate about her life story. A greater number of single childless participants would have contributed to strengthening the qualitative analysis. However, they were not easy to find, especially in rural areas; some participants referred to themselves as single and/or childless prior to the interview, but during the interview they explained that they had

children (who did not live with them anymore), or that they had been married in the past (but were widowed by the time the interview took place).

A limitation when trying to compare results from the quantitative and qualitative analyses was the cultural and socioeconomic factors that could not be compared in MHAS by state or studied in the qualitative analysis (through interviews from different parts of the country). As explained previously, Mexico is a large country with important variations in culture from north to south. For instance, the northern (e.g. Baja California, Coahuila and Nuevo Leon) and central populations are wealthier, while the southern residents (e.g. Oaxaca, Guerrero and Chiapas) experience higher levels of poverty (Palacio-Mejía *et al.,* 2009). They also have different traditions and lifestyles. Among the 32 states, Coahuila has the highest rate of divorce, separation and widowhood (35%), while Quintana Roo (10%) and Oaxaca have the lowest (5%) (INEGI, 2017). Two per cent of the population in Coahuila is illiterate, compared to 13.3% in Oaxaca (INEGI, 2017). Years of education are 9.9 on average in Coahuila and 7.5 in Oaxaca. Other relevant information such as employment, life expectancy, children per woman, marital status, health insurance and financial situation could not be taken into account when analysing the MHAS dataset. For this research, it would have been useful to compare data by state or alternatively only use information from Coahuila state, making the quantitative research more specific and comparable with the qualitative part of the research. However, specific information about the location of the participants is not shared by MHAS for data protection reasons.

The qualitative part of the research was only able to study some older women in a small part of the north; the results could have been more varied if more interviews had been carried out in other parts of the country such as the south. It would be interesting to do so in order to extend the knowledge. Of particular interest would be the themes of 'expectation', 'self-sufficiency', 'reciprocity', 'experiences' and 'location'; southern older women would probably report more dependence than northern older women and experience more disadvantages.

Regarding the need factor in the quantitative analysis; there were at least 13 questions in the MHAS questionnaire about presence of diseases such as cancer, diabetes, there were also variables about symptoms of disease, help with ADLs that were not included but could have been included to gather more information about perceived and objective need. Even

though the quantitative analysis includes a differentiation between in-patient and out-patient procedures (for some variables), for the purposes of the research, health-care services were undifferentiated. However, further differentiation might be useful in explaining the findings, for instance frequency and cost of treatments, specialised health-care services (e.g. oncology, dentistry).

8.7 Recommendations for further research

In a country such as Mexico, with continuous changes and reforms in the health-care system, it is important to research the political panorama in advance. It is important to be aware of changes that may occur rapidly, such as names of initiatives and providers.

Further quantitative analysis using the life course perspective could be carried out using the MHAS dataset and its previous waves. MHAS is an excellent, reliable dataset that allows use of the life course perspective. It is specific to research on ageing and has many advantages, such as making its data and other documents available in English and Spanish (MHAS, 2018). It also contains more specific variables about amounts and periods of financial support received; this could be important for further research, since this study has found that financial support is one of the main forms of support provided to older women by their children, and impacts on their use of health-care services. Researchers have used the MHAS dataset to provide useful research on older adults' access to and use of health-care services in Mexico. The published research on this is continuously updated in the MHAS website, making it easy for researchers to identify previous research on the topic.

While this thesis has explored several aspects of health-care access, utilisation and barriers affecting older Mexican women, a number of opportunities for further research have arisen. These opportunities could improve understanding of the dynamics of support and help, dependency for access to and use of health-care services, and reciprocity, which was an unexpected finding in the last stage of the research. There is enough data in MHAS to research current reciprocity between parents and children, but not to investigate past support by the participant to their children or spouse. Further qualitative research on perspectives of reciprocity and obligation of support among older Mexican women using

the life course perspective would extend the understanding of support dynamics in Mexican families. One of the main findings of this thesis was that support was temporary in participants' lives. Hence, qualitative studies could be the way forward for a better understanding of dependency and reciprocity for access to and use of health-care services among Mexican older women, using the life course perspective. Furthermore, an examination specifically targeting the adult children of this population would provide richer results. Collecting these children's perceptions would be a more straightforward way to ascertain whether the support is reciprocal than interviewing only mothers.

Understanding and addressing the policies and participants' understandings of them though structured dependency theory could play an essential part in informing policy aimed at access and utilisation of health-care provision in Mexico.

8.8 Conclusion

This chapter has discussed the key findings of the research in response to the thesis' research questions and in relation to the existing literature in this area. The findings show that roles assumed earlier in the life course such as marriage, motherhood and types of jobs (e.g. in the informal sector) reflect the access conditions that older women face in later life.

Employment opportunities available in the participants' locations (rural or urban areas) were key to identifying inequalities in accessing health-care services, especially IMSS and ISSSTE. Support was time-limited for some of the participants in the qualitative study; this was in part because participants could receive derived rights to access health-care only while the person they were dependent on was formally working; being unequal for those in rural areas. These findings were made possible by using the life course perspective during the analysis, as it enabled an understanding of the need of support to access health-care participants had during their life courses (e.g. accidents, disease) and their circumstances (e.g. having a family member working formally). These experiences, being a phase of participants' life course (micro level) were linked to policy (macro level) thanks to structured dependency theory, which allowed analysis of policies such as formal/informal employment and social norms reinforcing certain measures of dependency.

To conclude this thesis, the results highlight important issues that have arisen in relation to older women's access to and utilisation of health-care services in Mexico. Some of them are in line with previous research, such as the fact that some participants accepted the support they were receiving as a reciprocal exchange with their children as opposed to a one-way flow of support.

In terms of health-care reform, it was found that SPS is a successful programme in terms of affiliating older women, who are a vulnerable population in Mexico. Its access conditions are generally good and easy to fulfil compared with other providers, and may be even easier to achieve with INSABI, since there is no need for affiliation. However, the programme has several areas in which improvements need to be made, such as lack of medication, limited coverage, lack of personnel and lack of presence in rural areas; these are causing bad experiences when using the services, and as a consequence constitute utilisation barriers for older Mexican women. CMR is also a successful programme, together with other health initiatives which run for rural communities such as blood test services, X-rays and specialist appointments for patients. These have had a positive impact, making participants feel that they had some options if they needed further medical attention.

The quantitative findings showed that 7.1% of participants had no affiliation to any health-care provider and about 15% had double/multiple affiliations. This is in line with the most recent research using MHAS 2018, in which it was reported that 9.7% of women (over 50) were unaffiliated to a health-care provider (INEGI, 2020). The qualitative analysis, on the other hand, found that participants preferred to keep their affiliation to IMSS or ISSSTE rather than moving to SPS. Some were aware of the policies restricting double affiliations (see section 8.7). However, it maximised their options, enabling them to choose where to obtain health-care if needed.

This thesis emphasises the fragmentation of the Mexican health-care system. Health-care providers have different regulations and health-care coverage, serve different groups (see section 4.2) and provide varying quality of services. As a result of dissatisfaction with the health-care services provided by SPS, IMSS and ISSSTE, older Mexican women showed a very strong preference for private health-care. This is in line with the literature, which

shows that the rate of out-of-pocket payment for medical expenses is very high in Mexico (see section 4.2), causing financial hardship.

As discussed throughout the thesis, children and spouses did impact on participants' access to and use of health-care services. The statistics from the quantitative data show a disadvantage for childless and single women in terms of having fewer opportunities than other groups of women, but this is not supported by the qualitative data. The qualitative results indicate that single childless women can be self-sufficient and provide their own affiliation.

There has been research on this topic conducted in developed countries, for instance an analysis of the access to and use of health-care services in the USA by Mexican-American older adults and more specifically older women. However, the Mexican health-care system is different from the regulations and providers in the USA. Research investigating the effect of number of children (fertility) on older adults' health and well-being has focused on developed countries (Díaz-Venegas *et al.,* 2017). This study contributes to closing the literature gap by analysing such effects of fertility on health aspects such as access, utilisation and barriers in the developing, familialistic country of Mexico, showing that while it is true that children and spouses are enablers in this sense, they are not the only sources that older women use or prefer. Moreover, while number of children is linked to having access to health-care, a greater number of children does not necessarily represent more options or more access for Mexican women.

This study is innovative in terms of researching the impact of SPS on older Mexican women. There have been studies evaluating the impact of SPS on utilisation and health. Nevertheless, they are mainly focused on the younger population (children and adults), though a few had researched the impact of SPS on older adults by 2012, such as Parker and colleagues, who used MHAS data in a longitudinal study including waves 2001-2012 (Parker *et al.,* 2018). This study included wave 2015 and qualitative evidence from older Mexican women on SPS and other health-care providers in Mexico, extending the knowledge of the impact of the programme (SPS) and its relationship with other programmes (CMR).

To answer the three research questions briefly: How does having a spouse and/or child(ren) impact on older women's access to and use of health-care services in Mexico? Spouses and children were enablers of affiliation for participants, but not the only source of affiliation. They provided support; some older women expected it (mainly from the spouse) and some refused it (e.g. self-sufficiency). However, other factors, such as spouse and children's location and work conditions, also have a strong effect on access to health-care services among older women. Single and childless women were statistically disadvantaged, but they were self-sufficient in the qualitative analysis. What are the barriers older Mexican women face in gaining access to and using health-care services? And how can they overcome them? The main barriers were related to location and financial/work opportunities for participants and their family members. The participants overcame them by maximising their options via other health-care providers and making use of private providers when possible. What has been the experience of older women in Mexico of gaining access to and using health-care services since the introduction of SPS? The experiences of older women differed in relation to the health-care provider in question; their experiences were good when it came to private health-care, but showed deficiencies in SPS and IMSS.

Appendix A: Literature review strategy

First, to start categorising the information the researcher read and to take notes to form chapters in the future, a list of topics that came up from the literature was written (first reading outline). Later, a more sophisticated list of literature needed to complete such chapters was created (second reading outline).

Literature was organised using EndNote software under folders named: Literature review, Mexican Literature (including MHAS studies), Determinants of access to health-care, Theories and concepts, Andersen's behavioural model, Methodology, Dependency and Other (Recommended articles). During the beginning of the literature review the next list of keywords (English and Spanish), search-terms synonyms, truncation symbols, wildcards, inclusion/exclusion criteria, number of hits was created, however, more searches were made and articles referred to in other articles were added to the literature directly (in the reference list).

Example of the first search records:

Source:	Search terms:	Results produced:	Useful resources (after refine results and reading relevant abstracts):
MHAS Website	(Health care, socioeconomic status, caregiving, labour, rural/urban, widowhood, gender differences, social network, chronic diseases, health, mortality/social security pension, health behaviours, social/family support).	186	31
Web of science	dependenc* AND older women mexic* (access to Health) older mexic	205	4
Web of science	dependen* AND "older female mexic" OR "Mexic* elder"	19	0
Web of science	health dependen* AND "older female mexic" OR "Mexic* women".	1021	2
Web of science	(dependent) AND (old* OR eld*) AND (health)	39	0
Delphis	Determinant* of access to (healthcare OR health seeking) among (older adults OR elder*)	140	5
Web of science	Determinant* of (access OR seek* or search) to health services among older.	120	5
Web of science	Access* to health* among (ageing OR aging) population*	3639	13
Delphis	(Determinant* OR outcome*) of access to health* among (older women OR female*)	9081	0
Web of science	(health access* OR health seek*) AND (older women OR older female)	3622	23
Delphis	determinant* AND (healthcare OR "health seeking") AND ("older adults" OR "older people") OR (elder*)	66	4
Delphis	(factor* OR determinant*) AND ("health care" OR "health seeking") AND (older OR elder*)	405	4
PsycINFO	(factor* OR determinant*) AND ("health care" OR "health seeking") AND (older OR elder*)	24	0
Pro Quest	(factor* OR determinant* access health*) AND (older OR elder*)	193	3
Web of science	(factor* OR determinant*) AND access health* AND (old* OR elder* OR aged OR senior*) And (women OR female*)	2904	4
Science direct	(factor* OR determinant*) AND access* health* AND (old* OR elder* OR aged OR senior*) AND (women OR female*)	127	4
Science direct	(factor* OR determinant* AND access* health*) AND (old* OR elder* OR aged OR senior*)	406	4
Delphis	(factore* OR determinante*) AND (adult* mayor*) OR (ancian*) AND salud	70	0
MHAS Website	(Demographics, Health care, socioeconomic status, psychosocial factors, caregiving, survey methodology, labour, rural/urban, widowhood, gender differences, social network, chronic diseases, health, social security pension, health behaviours, social/family support).	242	2

Source: Researcher's notes.

First reading outline

TOPIC	DESCRIPTION
Marital status	Cohabitation, widowhood, marriage, single and divorced in older adults in Mexico. Including information about insurances, economics and health.
Couple's interactions	Couples (married or in cohabitation) interaction, decision power, arrangements, divorce, bargaining and different factors affecting the health of the individuals or their access to health.
Poverty	Statistics related to older adults and their households but also Mexican population in general.
Mexican health system	Seguro popular, health reforms, out of pocket (as a consequence of the lack of resources). Inequalities between insured and uninsured population. Barriers to having access to health services and medication. Statistics about an insured population by marital status in older adults.
Epidemiology	Most common diseases and disabilities in old age, deaths, and related statistics especially in Mexico. Also, information about insured and uninsured older persons is included here. Comparisons by rural and urban areas and gender.
Demography-living arrangements	Information about households-families of older adults. Statistics about types of households in Mexico, living arrangements and economic issues related. Also, Social networks to help older adults such as neighbours and friends.
Policies and culture implications affecting the dynamics of older adult's families and their health.	It may include economic-cultural. Policies influencing dependency from older adults to their children. Institutional support for older adults. And older women specifically.
Rural and urban comparisons	Important information for the sampling. Health, demographic and economic statistics comparisons between rural and urban areas of Mexico.
Fertility	Statistics about fertility in Mexico over this century, culture and policies implications. Also, how it affects older generations, in terms of health access.
Special notes	Unmarked text notes about methodology, authors or things I should read more, references, tips for sampling.
Female roles	Women's participation in the labour, decision power, their role in household dynamics. Possible explanations of the major support received from children compared with men.
Out of pocket in health	Here is out of pocket statistics related to health services in medication. Information about this can be also in children support code.
Dependency	Dependency of elders it may be of support, social care, economic. Characteristics of dependent mothers.
Health inequalities at older ages	By gender, economic or marital status.
Pension and retirement income-savings	Statistics and gender comparisons of retirement in Mexico, also a description of this process that impacts health in older adults. Income is included here as a result of a lack of pensions, as an alternative. How income affects health status in older Mexican citizens.
Mortality	Statistics about mortality in Mexico over the last years, causes should be in epidemiology.
Demography	Demographic factors, such as rural-urban, population in Mexico, population by gender.
Health	Characteristics of individuals with better or worst health (physical and psychological such as life satisfaction). Statistics about health in older adults. Health-related with economic resources. At a national level but also in an individual approach.
Policy recommendations	Policy recommendations mentioned in research articles. I'm not sure about this code.
Other initiatives in Mexico	Health-social and economic Initiatives carried out in Mexico such as 70 y mas, the non-contributory pension.
Support	The support provided from children to older adults and vice versa but not support given from the older adults to their parents (especially mothers). Informal support, financial transfers. Intergenerational relations. Statistics about older adults giving and receiving support.
Family	Familism.
Support givers	Characteristics of support givers, may be economic, labour, educational, social, availability, willingness.
Pharmacy as a provider of health services	Private pharmacies as a major source of informal care, prescription of medicines and treatment in Mexico.
Using health services	This refers to the use of health services, factors influencing for citizens to use it worldwide.
Reciprocity	From older women to their support givers, and how do they feel about it.

Source: Researcher's notes

Second reading outline:

Older women:

- Differences in older and younger generation of women in Mexico.
- Factors affecting their process of aging such as fertility, epidemiology, living arrangements, labour life.
- What are the believes of Mexican women towards marriage, living arrangements, fertility, health care, education, work, intergenerational exchanges.
- Marital status and living arrangement of older women: Childless older women, how are policies different in Mexico in terms of accessing pensions and social security?
- Older women accessing pensions (retirement pensions, widowhood pensions, etc).

Global gender inequalities:

Ethnic population of older women in Mexico.

- Is this population accessing to health services and in what way?
- How is this population different compared with non-ethnic Mexican population in terms of demography, epidemiology, education, literacy, fertility, culture, etc.?
- Where is this population living?

Health System:

- Antecedents of the Mexican health system, creation of the health institutions, rights of health globally, structure of the Mexican health system and how is this in comparison with other countries.
- What are the implications of formal and informal work, working full or part time, and range of wages when it comes to access to health services and pensions from the government?
- Health initiatives such as health institutes for older adults, law of older adults. How are older women benefiting from this initiatives?
- At what extent older adults can access to health services in Mexico Considering the Internal variation? What is each of the institutions offering in terms of primary, secondary, tertiary and custodial care?
- Health reform 2002 “popular insurance” what is it? How is this initiative covering almost 50% of Mexican population? How is it evaluated? Are older adults using this services?
- Health reform 2015, How is it changing the access to health for older women in Mexico? How is it influencing in dependency from parents to children? Is it increasing the out of pocket expense in health? Is it aiming to privatisation-universalisation?

Private health care:

- “Similar pharmacies” are older adults using this services as a primary health service and why? Comparisons between health care in a pharmacy compared with the government health institutions. Cost-distances, waiting time, etc.
- Private health insurances in Mexico; cost, distances, waiting time, etc.

Rural and urban differences in health access.

- In what extent is different the ageing experience in older rural-urban population?
- What are the limitations rural areas have in terms of accessing health services?
- What are the characteristics to consider rural-urban populations? And how is it different in other countries? (Number of inhabitants, access to services, etc).

Use of health services:

- Come back to the point that older women use more and more frequency compared with men. Why is it?

- Explore the barriers older women have in terms of accessing health services (economic, sociocultural, regulations, etc.).

Intergenerational support.

- Globally which is the situation of older women in terms of children support? Focus on health, are children paying for the medical expenses of their older adult parents (mothers)? What are the parents (mothers) giving back?
- How the intergenerational exchanges differ for older fathers compared with older mothers?
- Number of children, gender, education and work condition, marital status, and its relation with support giving.
- How is the economic situation in Mexico affecting the intergenerational exchanges?
- How are laws in Mexico promoting intergenerational support from children to parents and in which specific states is this happening more?
- Values of reciprocity and support transfer.

Dependency for health.

- What are the options older women have to access health services apart from their relatives? What options do they have when it comes to pay for treatments, and medication?
- Explore the implications that being widowed, divorced, single, married, childless have on being dependent?
- Are older women accessing in a condition of dependency to health services?
- Why the percentages of dependency for ageing increased in Mexico?

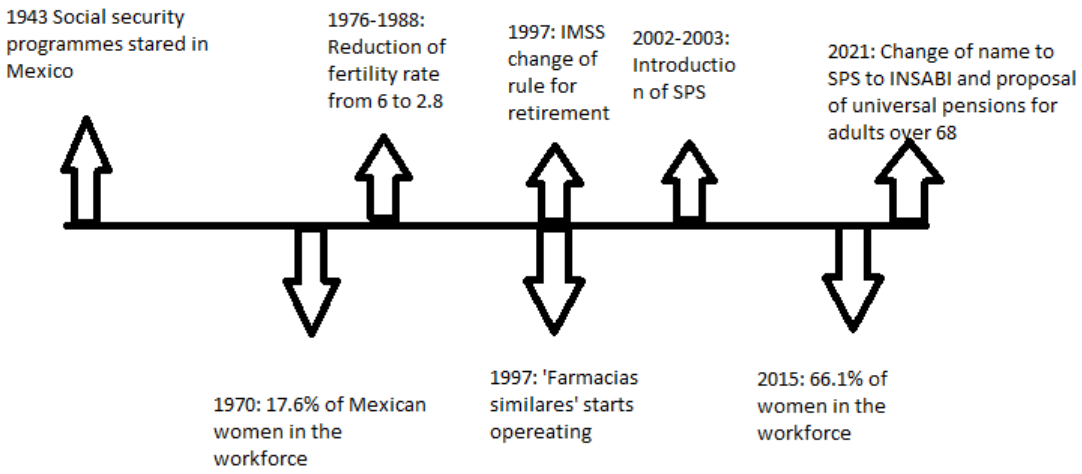
Source: Researcher's notes

Later on the research End Note was not used and articles were saved in specific folders and references were added manually in the reference list.

Overall sources of information during the research:

Web of science, Research Gate, University of Southampton Library and University of Southampton library website, PsycINFO, Pro Quest, Science Direct, Delphis, Google Scholar, Google and files shared by supervisors and other students.

Appendix B: Mexican timeline of policy changes and introduction of programmes



Appendix C: Extracts from MHAS questionnaire

GENERAL DATA

A.1 INTERVIEWER: INDICATE IF THE RESPONDENT IS:

MALE 1
FEMALE 2

A.2a During the last interview, you said your birth date was _____. Is this correct?

Yes 1
No 2

PRELOADED
(A2a2_1/A2a2_2/A2a2_2 o AA2_1/AA2_2/AA2_3 en 2012)
ENTER DAY, MONTH, AND YEAR

|_|_| |_|_| |_|_|_|_|

A.2b How old are you in full years?

ENTER FULL YEARS

YEARS ..... |_|_|_|
RF 888
DK 999

A.2c During the last interview you stated that you were born in _____. Is this correct?

PRELOADED
(A2 in 2001, AA3 in 2003, or A2d or AA3 in 2012)

Yes ..... 1 → Skip to A.3
No ..... 2 → Go to A.2d

AA.4a What is the last year or grade that you completed in school?

ENTER LEVEL AND GRADE

LEVEL:

None ..... 0 → Go to AA.4b
Primary ..... 1 → Go to AA.4b
Secondary ..... 2 → Skip to AA.6
Technical or Commercial ..... 3 → Skip to AA.6
Preparatory or High School ..... 4 → Skip to AA.6
Basic teaching school ..... 5 → Skip to AA.6
College ..... 6 → Skip to AA.6
Graduate school ..... 7 → Skip to AA.6
RF ..... 8 → Go to AA.4b
DK ..... 9 → Go to AA.4b

GRADE ..... |_|

MARITAL STATUS

AA.10 Currently are you...

READ AND RECORD ONE OPTION

single ..... 1 → Skip to AA.19
married ..... 2 → Skip to AA.12
in a civil union ..... 3 → Skip to AA.12
divorced ..... 4 → Go to AA.11
separated...
from civil union ..... 5 → Go to AA.11
from marriage ..... 6 → Go to AA.11
widowed?
from civil union ..... 7 → Go to AA.11
from marriage ..... 8 → Go to AA.11

FERTILITY

AA.19 How many children born alive have you had?

ENTER TOTAL CHILDREN

NUMBER ..... |_|_|

NONE ..... 00 → Skip AA.21
RF ..... 88 → Skip AA.21
DK ..... 99 → Skip AA.21

AA.20 Of those children who were born alive, how many of them are still alive?

ENTER TOTAL CHILDREN

NUMBER ..... |_|_|

All 96
RF 88
DK 99

SECTION C. HEALTH

START TIME |__|__|:|__|__|

GENERAL HEALTH

C.1 **Now I have some questions about your health. Would you say your health is...**

READ AND RECORD ONE OPTION

Excellent?	1
Very good?	2
Good?	3
Fair?	4
Poor?	5
RF	8
DK	9

ACCESS AND UTILIZATION OF HEALTH SERVICES

	D.1 Do you have the right to medical attention in...? RECORD IN EACH OPTION	D.2 Do you have the right to these medical services because you are... READ AND RECORD ONE OPTION
	Yes 1 → Go to D.2; No 2 → Go to next column or a D.3a; RF 8; DK 9	A worker? 1; Affiliated on your own? 2; Retired? 3; Spouse of insured? 4; Mother or father of insured? 5; OTHER 7; RF 8; DK 9
Social Security (IMSS)	☐	☐
ISSSTE/ State ISSSTE	☐	☐
Seguro Popular	☐	☐
PEMEX, Defense or Marine	☐	☐
Private Medical Insurance	☐	☐
OTHER	☐	☐

IF RECORDED NO (2) IN ALL OPTIONS OF D.1, ASK THE FOLLOWING TO VERIFY; IF AT LEAST ONE YES=1 IN D.1, SKIP TO D.3b

D.3a **Then, you do not have the right to medical services in any institution?**

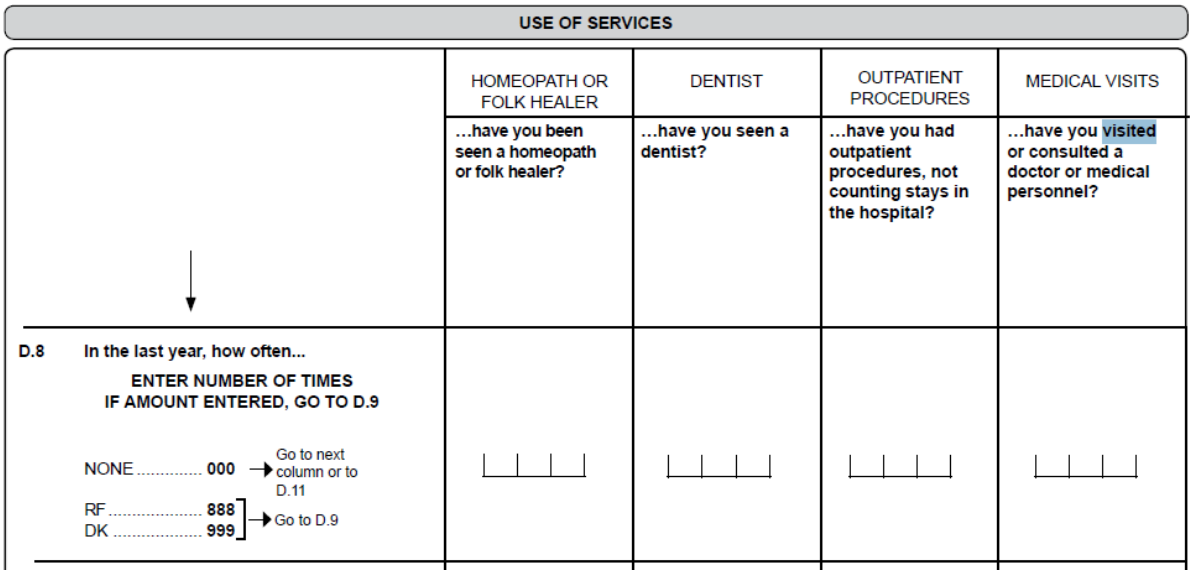
RECORD ONE OPTION

YES, HE/SHE HAS	1	→ Check D.1 and D.2 and go to D.3b
NO, HE/SHE DOESN'T HAVE	2	→ Go to D.3b
RF	8	
DK	9	

D.11 In the last year, have you consulted a pharmacist about your health?

RECORD ONE OPTION

Yes	1
No	2
RF	8
DK	9



USE OF SERVICES

	HOMEOPATH OR FOLK HEALER	DENTIST	OUTPATIENT PROCEDURES	MEDICAL VISITS
	...have you been seen a homeopath or folk healer?	**...have you seen a dentist?**	**...have you had outpatient procedures, not counting stays in the hospital?**	**...have you visited or consulted a doctor or medical personnel?**
D.8 **In the last year, how often...** **ENTER NUMBER OF TIMES IF AMOUNT ENTERED, GO TO D.9**				
NONE ..... 000 → Go to next column or to D.11				
RF ..... 888 / DK ..... 999 → Go to D.9				

(D8 only included outpatient procedures and medical visits).

MEDICAL EXPENSES

D.13 In the last year, who paid most of the out-of-pocket medical costs?

RECORD ONE OPTION

SON/DAUGHTER	01	→ Go to D.14
SON/DAUGHTER-IN-LAW	02	
GRANDCHILD	03	
FATHER/MOTHER	04	→ Skip to D.15
OTHER RELATIVE	05	
OTHER PERSON	06	
RESPONDENT AND/OR SPOUSE	07	
DIDN'T HAVE EXPENSES	08	
RF	88	
DK	99	

BELIEFS

D.15 In the last two years, did you ever thought that you had a serious health problem but did not go to the doctor?

RECORD ONE OPTION

Yes	1	→ Go to D.16
No	2	→ Skip to D.17
RF	8	
DK	9	

D.16 Why didn't you go to the doctor?

READ AND RECORD ONE OPTION FOR EACH ROW

		Yes	No	RF	DK
D.16a	Thought that he/she would not help you to get better	1	2	8	9
D.16b	Thought that it would take you too long to get there	1	2	8	9
D.16c	Did not have money	1	2	8	9
D.16d	Did not want to bother anyone to take you	1	2	8	9
D.16e	Were afraid of what the doctor might find	1	2	8	9

CURRENT WORK ACTIVITY

I.16 Currently you...

READ AND ENTER ONE OPTION

Are working	1	→ Go to I.17
Are looking for work	2	→ Skip to I.26
Don't work	3	
RF	8	
DK	9	

I.26 What is the reason you do not work?

RECORD ALL THE OPTION HE/SHE INDICATES

Dedicated to household chores	1
Retired	2
Old age	3
Sick or temporarily disabled	4
Unable to work for rest of life	5
Doesn't have customers or can't find work	6
OTHER _____ SPECIFY	7
RF	8
DK	9

OTHER BENEFITS

I.25a In your current primary job, which of the following benefits do you receive?

RECORD ONE OPTION IN EACH ROW

	YES	NO	RF	DK
IMSS	1	2	8	9
ISSSTE	1	2	8	9
SAR (Savings for retirement)	1	2	8	9
Accounts in "Afores"	1	2	8	9
Housing credit	1	2	8	9
Private health insurance or medical expenses service	1	2	8	9
Life Insurance	1	2	8	9
OTHER	1	2	8	9

I.28 What was the reason you left your last job?

READ AND RECORD ALL OPTIONS HE/SHE INDICATES

Source of work closed down/cut down on staff/is bankrupt 01
It was temporary and the time period of the work ended 02
The business moved 03
Made too little money 04
The work schedule was inconvenient 05
It wasn't related to your studies or training 06
To care for children or other family member 07
Due to sickness 08
You retired 09
Other _____ (specify) 10

RF 88
DK 99

I.30 Would you say your financial situation is...?

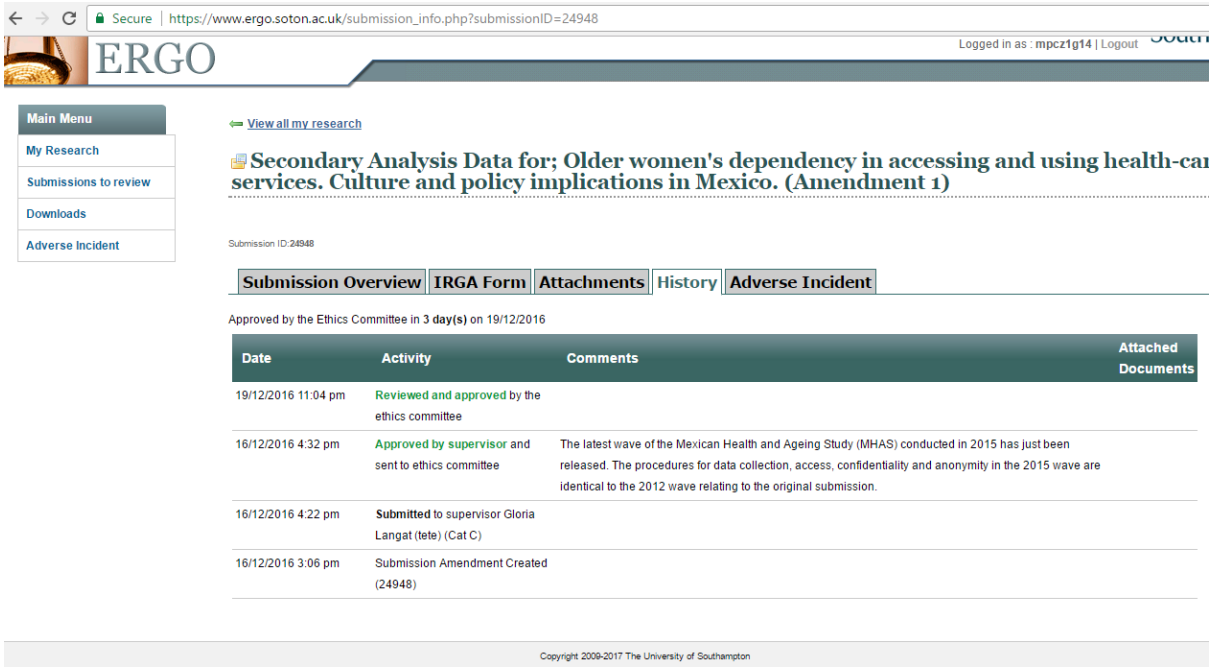
READ AND ENTER ONE OPTION

Excellent 1
Very good 2
Good 3
Fair 4
Poor 5

RF 8
DK 9

Source: MHAS, (2015).

Appendix D: Ethics Approval Confirmation for the quantitative analysis



Secure | https://www.ergo.soton.ac.uk/submission_info.php?submissionID=24948

ERGO

Logged in as : mpcz1g14 | Logout

Main Menu

- My Research
- Submissions to review
- Downloads
- Adverse Incident

View all my research

Secondary Analysis Data for; Older women's dependency in accessing and using health-ca services. Culture and policy implications in Mexico. (Amendment 1)

Submission ID:24948

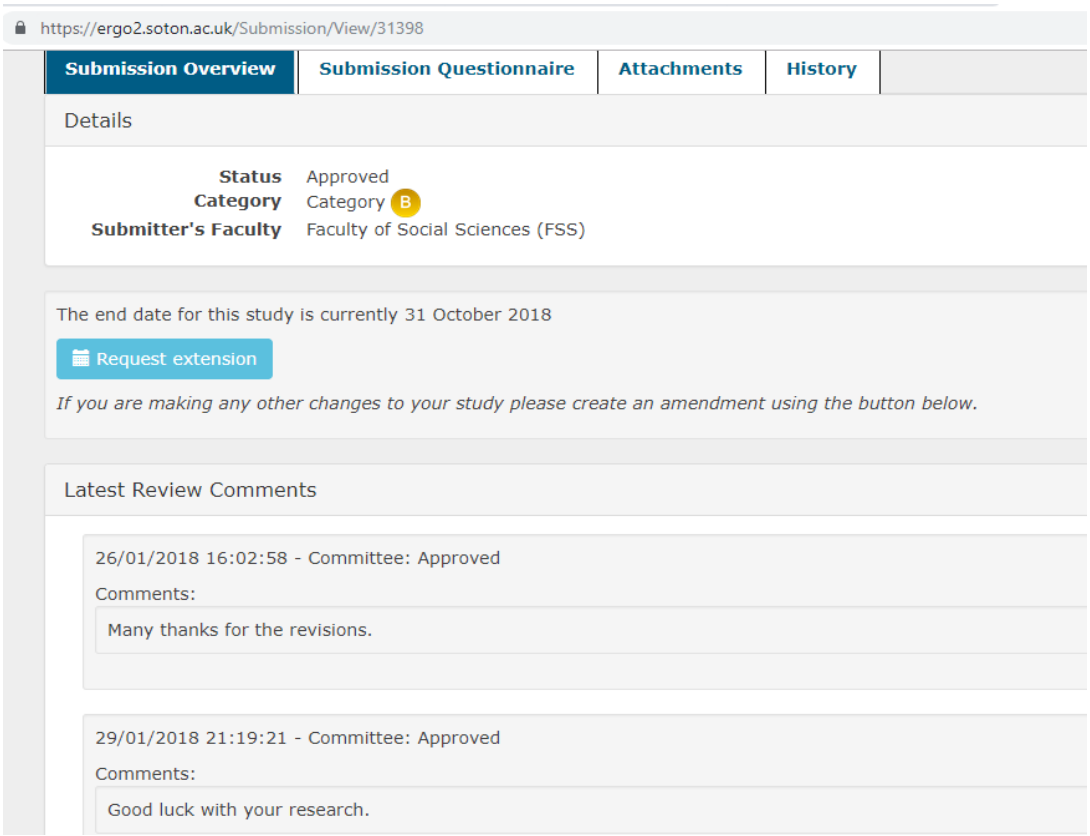
Submission Overview | IRGA Form | Attachments | History | Adverse Incident

Approved by the Ethics Committee in **3 day(s)** on 19/12/2016

Date	Activity	Comments	Attached Documents
19/12/2016 11:04 pm	Reviewed and approved by the ethics committee		
16/12/2016 4:32 pm	Approved by supervisor and sent to ethics committee	The latest wave of the Mexican Health and Ageing Study (MHAS) conducted in 2015 has just been released. The procedures for data collection, access, confidentiality and anonymity in the 2015 wave are identical to the 2012 wave relating to the original submission.	
16/12/2016 4:22 pm	**Submitted** to supervisor Gloria Langat (tete) (Cat C)		
16/12/2016 3:06 pm	Submission Amendment Created (24948)		

Copyright 2009-2017 The University of Southampton

Appendix E: Ethics approval confirmation for the qualitative analysis



https://ergo2.soton.ac.uk/Submission/View/31398

Submission Overview | Submission Questionnaire | Attachments | History

Details

Status Approved
Category Category B
Submitter's Faculty Faculty of Social Sciences (FSS)

The end date for this study is currently 31 October 2018

Request extension

If you are making any other changes to your study please create an amendment using the button below.

Latest Review Comments

26/01/2018 16:02:58 - Committee: Approved

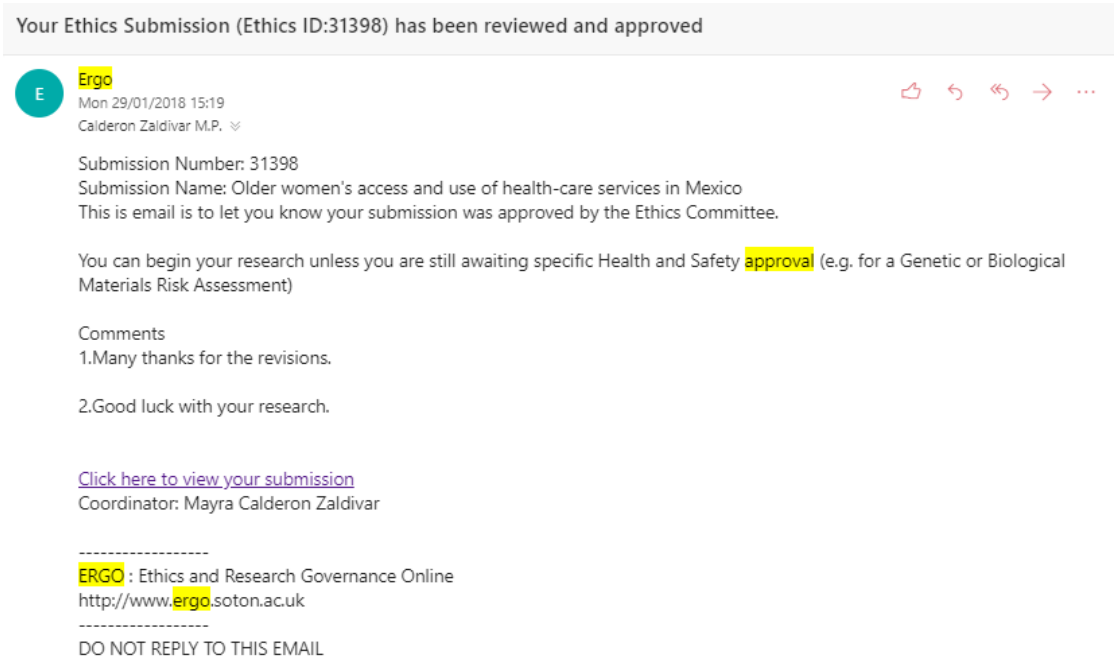
Comments:

Many thanks for the revisions.

29/01/2018 21:19:21 - Committee: Approved

Comments:

Good luck with your research.



Your Ethics Submission (Ethics ID:31398) has been reviewed and approved

E

Ergo
Mon 29/01/2018 15:19
Calderon Zaldivar M.P.

Submission Number: 31398
Submission Name: Older women's access and use of health-care services in Mexico
This is email is to let you know your submission was approved by the Ethics Committee.

You can begin your research unless you are still awaiting specific Health and Safety approval (e.g. for a Genetic or Biological Materials Risk Assessment)

Comments
1.Many thanks for the revisions.

2.Good luck with your research.

Click here to view your submission
Coordinator: Mayra Calderon Zaldivar

ERGO : Ethics and Research Governance Online
http://www.ergo.soton.ac.uk

DO NOT REPLY TO THIS EMAIL

Appendix F: Interview guide for the qualitative analysis

Interview guide. Semi-structured interviews with older women in Coahuila Mexico.

Date of the interview: _____

Participants anonymised name: _____

Locality: _____ (code the locality size)

(1: Population = 100,000+, 2: Population = 15,000-99,999, 3: Population = 2,500-14,999, 4: Population <2,500).

Obtain informed consent (information sheet and consent form) first.

Mention this at the beginning of the interview "It is your right to withdraw your consent to participate in this study at any point in this interview, it is your right to decide to answer or not any particular question in this interview, you just need to indicate it to me without penalty".

Introduction

Let's start talking a bit about you and your family…

Who do you live with/in this house?

Do you have any child (ren)? Spouse? If yes, what are their ages and where do they live?

Are you married?

Health

Let's talk a about your health…

Generally, how do you consider your health?

Do you have any condition that has lasted for a long time and affects your health? (Chronic condition –diabetes-hypertension-cancer). (If yes enquire what the condition is, is she on treatment, how it affects her daily life, how costly is it).

Is there something in particular that causes you worries about your health? If yes, can you tell me a bit more about that please.

Access to health-care services

Do you have the right to medical attention/are you affiliated to a health-care provider? How is that?

Note: Main health-care providers are; IMSS, ISSSTE/ State ISSSTE, PEMEX, Defence or Marine, private Medical Insurance.

Reasons of affiliation may be: Through your job, children, spouse, though a social program.

Tell me about your experience with the access to health-care services (which health-care providers have you been affiliated during your life and why?)… Let´s start when you started working…….. Then (E.g. getting married-getting children-getting 60 years old-2004). (Enquire about the changes in accessing health-care services over her life).

Do you have a preference for a specific health-care provider? And why?

Do you know SPS (Seguro Popular)? If yes what do you think of it?

Utilisation of health-care services

How often do you visit a doctor or medical personnel regarding your health? (This can be to check-ups or when getting sick).

When you have a minor health problem, for instance a flu or cough. What do you do to deal with this? (Enquire where the woman is attended generally? how costly is it? who pays for the services and how the woman evaluates the services?).

(If the participant does not have cancer, leukaemia or blindness ask the next question)

If one day you find that, you have cancer, leukaemia or blindness what would you do to deal with this? (Enquire what hospital she would attend? how costly would it be? i.e. chemotherapy, who would pay for that and what is the participant's perspective of the services?).

If you have a sudden health issue, for instance a heart attack or an accident. What would you do to deal with this? (enquire where the participant considers that she can attend,

how costly would it be, who would pay for that and what is the participant's perspective of the services).

It is important to know about those specific conditions because certain health-care providers do not offer coverage for cancer, leukaemia or blindness.

(If participant uses health-care services):

How satisfied are you with the health-care services you receive? Why?

What can be done to improve your satisfaction?

Do you take any medication regularly? (Enquire who pays for medication and how much is the expense).

Barriers

Have you stopped taking any medication you need? When and why?

Have you think you had a serious health problem and you did not seek for medical care? When and why?

Is there anything that would make it easier for you to access medical care?

Family

If this has not been answered previously in this interview…..

(If participant has a spouse)

- Tell me a bit about your spouse's access to health-care services… (To which health-care provider, through which means*).

Tell me a bit about your children's access to health-care services… (To which health-care provider, through which means*).

* E.g. Through a kin, through his/her work, through his/her pension, through being student, because he/she contracted the service or through a social program.

Do your children and/or spouse provide you with any kind of help to access or use health-care services? (If yes, enquire how is the support provided, who pays what?).

If she access to health-care services as a derived right from others ask the next question:

If your spouse/child(ren) could not provide you with access to ___ medical service. What other options would you have? (Enquire what her experience would be like? Does she has any worries about this?)

Work history

Before finishing the interview let's talk about your job and whether you have received benefits for your health from it during your life…

Have you ever worked during your life? If yes: tell me more about that… (enquire if the woman works formally or informally, if she is still working and if not why did she stopped working, how was the access to health-care services through her life)

(If the participant still works)

What about now? (Enquire if she receive any health benefits through her job and if not why)

Economy, out-of-pocket medical expenses

How do you consider your financial situation is...?

How do you feel about spending out-of-pocket in medical expenses?

Future details

Is there anything else you would like to tell me about your access and/or use of health-care services?

Do you have any questions for me?

If when analysing your interview is there something, I do not understand very well could I call you to ask you again?

(If yes, write a contact number or e-mail)

Thanks you very much for your time, we finished the interview.

Observations:

Appendix G:Research timeline

	2016												2017												2018		
ACTIVITY	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR
Literature review writing																										
Qualitative methods modules																										
Preparation for quantitative analysis																										
Ethics application for quantitative																										
Methodology reading/planning/ writing																										
Quantitative methods modules																										
1st annual review/ PGTracker																										
Quantitative analysis																										
Apply for funding for qualitative																										
Planning qualitative research (sampling, design interview, trip)																										
Ethics application for qualitative																										
Qualitative data collection Mexico																										

	2018									2019												2020				
ACTIVITY	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Upgrade																										
Qualitative data collection Mexico																										
Qualitative data analysis																										
Update methodology chapter																										
3rd annual review/PGRTracker																										
Suspension period																										
Writing up discussion and conclusion chapter																										
Thesis review (draft)																										

	2020							2021											
ACTIVITY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
Suspension period																			
Thesis review (draft)																			
Update literature review																			
Thesis submission																			
Prepare and present viva																			

References

Ahmad, W. and Walker, R. (1997) 'Asian Older People: Housing, Health and Access to Services', *Ageing & Society,* 17(2), pp. 141-165.

Alkhawaldeh, A., Holm, M., Qaddumi, J., Petro, W., Jaghbir, M. and Al-Omari, O. (2014) 'A Cross-Sectional Study to Examine Factors Associated with Primary Health Care Service Utilization among Older Adults in the Irbid Governorate of Jordan', *Current Gerontology & Geratrics Research*, pp. 1-7.

Agren, D., (2020). Farewell Seguro Popular. *The Lancet* (London, England), 395(10224), pp. 549-550.

Allen, R. and Wiles, J. (2013) 'Receiving Support when Older: What Makes it OK?', *The Gerontologist*, Available at: http://gerontologist.oxfordjournals.org/content/early/2013/05/29/geront.gnt047.full.pdf+html (Accessed: 18-06-19).

Al-Yousif, N., Hussain, H. and El-Din, M. (2014) 'Health Care Services Utilization and Satisfaction among Elderly in Dubai, UAE and some Associated Determinants', *Middle East Journal of Age & Ageing,* 11(3), pp. 25.

ANEI (2014) 'Sólo 26.1% de Adultos Mayores de 60 Años Cuentan con Pensión: INEGI´ *La Asociación Nacional de Empresarios Independientes (ANEI),* September 2014. Available at: https://www.anei.org.mx/solo-26-1-de-adultos-mayores-de-60-anos-cuentan-con-pension-inegi/ (Accessed: 25-06-21).

Andersen, R., Lewis, Z., Giachello, L., Aday, A. and Chiu, G. (1981) 'Access to Medical Care among the Hispanic Population of the South-western United States'. *Journal of Health and Social Behavior,* pp. 78-89.

Andersen, R. (1968) 'A Behavioural Model of Families' Use of Health Services', *Research Series*, 25.

Andersen, R. and Newman, F. (1973) 'Societal and Individual Determinants of Medical Care Utilization in the United States'. *Milbank Quarterly*, 83(4).

Andersen, R. (1995) 'Revisiting the Behavioral Model and Access to Medical Care: does it matter?', *Journal of Health and Social Behavior,* 36(1), pp. 1-10.

Andersen, R., Gallagher, T., Gelberg, L. and Koegel, P. (1997) 'Determinants of Regular Source of Care among Homeless Adults in Los Angeles', *Medical Care*, 35(8), pp. 814-830.

Animal Político (2018) 'Plan de salud de AMLO Propone Sustituir el Seguro Popular y Eliminar el Cuadro básico de Medicamentos', 18th December 2018. *Animal Político*. Available at: https://www.animalpolitico.com/2018/12/plan-salud-amlo-seguro-popular-medicamentos/ (Accessed: 20-08-19).

Angel, J., Montez, J. and Angel, R. (2011) 'A Window of Vulnerability: Health Insurance Coverage among Women 55 to 64 Years of Age', *Women's Health Issues*, 21(1), pp. 6-11.

Angel, L., Vega, W. and López-Ortega, M. (2017) 'Aging in Mexico: Population Trends and Emerging Issues', *The Gerontologist*, 57(2), pp. 153-162.

Antonucci, T. and Akiyama, H. (1987) 'An Examination of Sex Differences in Social Support among Older Men and Women', *Sex Roles,* 17(11/12), pp. 737-749.

Babitsch, B., Berger, C., Borgetto, B. and Ciupitu-Plath, C. (2014) 'Health Care Utilization: Insights from Qualitative Research', *Health Care Utilization in Germany*. Springer, pp. 87-97.

Bachelet, M. (2015) 'Towards Universal Health Coverage: Applying a Gender Lens', *The Lancet*, 385(9975), pp. e25-e26.

Bacsu, J., Jeffery, B., Johnson, S., Martz, D., Novik, N. and Abonyi, S. (2012) 'Healthy Aging in Place: Supporting Rural Seniors' Health Needs', *Online Journal of Rural Nursing and Health Care*, 12(2), pp. 77-87.

Baker, S. and Cousins, R. (1984) 'Clarification of the Use of CHI-square and Likelihood Functions in Fits to Histograms', *Nuclear Instruments and Methods in Physics Research,* 221(2).

Barraza-Lloréns, M., Bertozzi, S., González-Pier, E. and Gutiérrez, J. (2002) 'Addressing Inequity in Health and Health Care in Mexico', *Health Affairs*, 21(3), pp. 47-56. Available at: https://www.healthaffairs.org/doi/full/10.1377/hlthaff.21.3.47 (Accessed: 28-09-19).

Barrientos, A. (2012) 'Dilemas de las políticas sociales latinoamericanas: ¿hacia una protección social fragmentada?', *Nueva Sociedad,* 239, p. 65.

Bautista-Arredondo, S., Serván-Mori, E., Colchero, M., Ramírez-Rodríguez, B. and Sosa-Rubí, S. (2014) 'Análisis del Uso de Servicios Ambulatorios Curativos en el Contexto de la Reforma para la Protección Universal en Salud en México', *Salud Pública de México*, 56, pp. 18-31.

Belgrave, L. (1994) 'Discrimination Against Older Women in Health Care', *Journal of Women & Aging*, 5(3-4), pp. 437-442.

Bengtson, V., Burgess, E. and Parrott, T. (1997) 'Theory, Explanation, and a Third Generation of Theory Development in Social Gerontology'*, Journal of Gerontology: Social Sciences*, 52B(2), pp. S72-S88.

Bengtson, V., Elder, J. and Putney, N. (2012) 'The Life Course Perspective on Ageing: Linked Lives, Timing, and History', *Adult lives: A life course perspective*, pp. 9-17.

Benjamins, M. and Brown, C. (2004) 'Religion and Preventative Health Care Utilization Among the Elderly', *Social Science & Medicine*, 58(1), pp. 109-118.

Beyeler, N., González-Pier, E., Alleyne, G., Barraza-Lloréns, M., Frenk, J., Pablos-Mendez, A., Pérez-Cuevas, R., Regalia, F., Sepúlveda, J. and Jamison, D. (2015) 'Global health 2035: Implications for Mexico (commentary)', *Salud Pública de México,* 57(5), pp. 441-443.

Boneham, M. and Sixsmith, J. (2006) 'The Voices of Older Women in a Disadvantaged Community: Issues of Health and Social Capital', *Social Science and Medicine,* 62(2), pp. 269-279.

Braun, V. and Clarke, V. (2006) ´Using Thematic Analysis in Psychology´, *Qualitative Research in Psychology,* 3, pp. 77-101.

Braun, V. and Clarke, V. (2013) *Successful Qualitative Research: A practical guide for beginners*. London: Sage.

Braun, V. and Clarke, V. (2014) 'What can "Thematic Analysis" Offer Health and Wellbeing Researchers?' *International Journal of Qualitative Studies on Health and Wellbeing*, 9.

Braun, V. and Clarke, V. (2013) 'Teaching Thematic Analysis: Overcoming Challenges and Developing Strategies for Effective Learning', *The Psychologist*, 26(2), pp. 120-123.

Braun, V. and Clarke, V. (2019) 'Reflecting on reflexive thematic analysis' *Qualitative Research in Sport, Exercise and Health,* 11(4), pp. 589-597.

Breheny, M. and Stephens, C. (2009) 'I Sort of Pay Back in my Own Little Way': managing independence and social connectedness through reciprocity', *Ageing and Society,* 29(8), pp. 1295-1313.

Brenes-Camacho, G. and Rosero-Bixby, L. (2009) 'Differentials by Socioeconomic Status and Institutional Characteristics in Preventive Service Utilization by Older Persons in Costa Rica', *Journal of Aging and Health*, 21(5), pp. 730-758.

Broyles, R., Manga, P., Binder, D., Angus, D. and Charette, A. (1983) 'The Use of Physician Services Under a National Health Insurance Scheme: An Examination of the Canada Health Survey', *Medical Care,* pp. 1037-1054.

Bushelle-Edghill, J., Laditka, J., Laditka, S. and Huber, L. (2015) 'Evaluating Access to Primary Health Care Among Older Women and Men in Barbados. Using Preventable Hospitalization', *Journal of Women & Aging*, 27(4), pp. 273-289.

Cámara de diputados del H. Congreso de la Unión (2017) *Ley General de Salud.* Available at: http://www.diputados.gob.mx/LeyesBiblio/ref/lgs.htm (Accessed: 20-05-17).

Cámara de diputados del H. Congreso de la Unión (2014) *Ley del Seguro Social.* Secretaría General and Secretaría de Servicios Parlamentarios.

Cambridge (2019). *Definition of expectation.* Available at: https://dictionary.cambridge.org/dictionary/english/expectation (Accessed: 10-06-19).

Cárdenas, A. and Ramírez, A.M.Y. (eds.) (2018) *Mujer (es), familia (s) y trabajo (s): un debate internacional.* Teseo.

Carson, D., Gilmore, A., Perry, C. and Gronhaug, K. (2001) *Qualitative Marketing Research.* London: Sage.

Casares, R. (2015) *El reto del Seguro de Gastos Médicos en México.* Available at: http://www.pwc.com/mx/es/industrias/articulos-salud/gastos-medicos.jhtml (Accessed: 15-04-17).

Cattan, M. (2009) *Mental Health and Well Being in Later Life.* UK*:* McGraw-Hill Education.

Cetrángolo, O., Cruces, G. and Titelman, D. (2007) '*Protección Social y Sistemas de Salud en América Latina y el Caribe IX Jornadas Argentinas de Estudios de Población'*, Asociación de Estudios de Población de la Argentina.

Chang, W., Lan, T., Ho, W. and Lan, T. (2010) 'Factors Affecting The Use of Health Examinations by the Elderly in Taiwan', *Archives of Gerontology and Geriatrics*, 50, pp. S11-S16.

Chappell, N. and Penning, M. (1996) 'Employer-based Health Insurance and Seniors: The case of Bermuda', *Gerontologist*, 36(1), pp. 63-69.

Cirelli, V. (1990) *Family support in relation to health problems of the elderly. Family relationships in later life* (Focus/2nd Edition). Thousand Oaks, CA: SAGE Publications.

Clive, S., Silverman, D., Jaber, F., and Giampetro, G. (2006) *Qualitative Research Practice* (Abridged). SAGE.

Cobb, K. and Forbes, S. (2002) 'Qualitative Research: What does it have to offer to the Gerontologist?', *Journal of Gerontology,* 57A(4), pp. M197-M202.

Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL) (2014) *Indicadores de Acceso y uso Efectivo de los Servicios de Salud de Afiliados al Seguro Popular.* México, DF: CONEVAL. Available at: http://www.coneval.org.mx/Informes/Evaluacion/Impacto/Acceso%20y%20Uso%20Efectivo.pdf (Accessed: 24-03-17).

Coulton, C. and Frost, A. (1982) 'Use of Social and Health-Services by the Elderly'. *Journal of Health and Social Behavior*, 23(4), pp. 330-339.

Coyne, I. (1997) 'Sampling in Qualitative Research. Purposeful and Theoretical Sampling; Merging or Clear Boundaries?', *Journal of Advanced Nursing*, 26(3), pp. 623-630.

Creswell, J. (2003) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (2nd Edition).

Creswell, J. (2013) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Sage Publications.

Crimmins, E., Hayward, M. and Saito, Y. (1994) 'Changing Mortality and Morbidity Rates and the Health Status and Life Expectancy of the Older Population', *Demography,* 31(1), pp. 159-175.

Dannefer, D. (2003) 'Cumulative Advantage/Disadvantage and the Life Course: Cross-Fertilizing Age and Social Science Theory', *Journal of Gerontology,* 58B(6), pp. S327-S337.

Dantés, O., Sesma, S., Becerril, V., Knaul, F., Arreola, H. and Frenk, J. (2011) 'Sistema de Salud de México', *Salud Pública de México*, 53, pp. s220-s232.

Data Mexico (2020) *Vendedores Ambulantes.* Available at: https://datamexico.org/es/profile/occupation/vendedores-ambulantes (Accessed: 21-06-21).

De-Wind, A., Geuskens, G., Reeuwijk, K., Westerman, M., Ybema, J., Burdorf, A., Bongers, P. and Van Der Beek, A. (2013) 'Pathways Through Which Health Influences Early Retirement: a Qualitative Study', *BMC Public Health,* 13(1), pp. 1.

Díaz-Venegas, C., Sáenz, J. and Wong, R. (2017) 'Family Size and Old-age Wellbeing: Effects of the Fertility Transition in Mexico'. *Ageing and Society,* 37(3), pp. 495–516. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5321659/pdf/nihms-815589.pdf or doi:10.1017/S0144686X15001221 (Accessed: 01-10-19).

Dorantes, R. (2015) 'Participación de las Organizaciones de la Sociedad Civil en la Atención a Personas Adultas Mayores' [PowerPoint presentation]. *Seminar-Workshop Sistemas de apoyo formal e informal para personas adultas mayores en Mexico y Estados Unidos, El contexto de las reformas en salud y seguridad social.* Available at: http://www.geriatria.salud.gob.mx/descargas/publicaciones/ponencias-apoyo (Accessed: 05-10-19).

Duggleby, W., Abdullah, B. and Bateman, J. (2004) 'Persevering: The Experience of Well Elderly Women Overcoming the Barriers to the US Health Care System', *Journal of Women & Aging,* 16(3-4), pp. 119-132.

Elder, G. (1994) 'Time, Human Agency, and Social Change: Perspectives on the Life Course', *Social Psychology Quarterly*, 57(1), pp. 4-15.

Espejel, A. (2019) 'Llega a Beneficiarios Aumento en Pensión del Programa 60 y Más', *El Popular*. 19th January 2019. Available at: https://www.elpopular.mx/2019/01/19/local/llega-a-beneficiarios-aumento-en-pension-del-programa-60-y-mas-197290 (Accessed: 27-09-19).

Evans, R. (2002) 'Financing Health care: Taxation and the Alternatives', *Funding Health Care: Options for Europe,* pp. 31-58.

Evashwick, C., Rowe, G., Diehr, P. and Branch, L. (1984) 'Factors Explaining the Use of Health Care Services by the Elderly', *Health Services Research*, 19(3), pp. 357-382.

Excelsior (2021) 'Cómo tramitar la pensión para adultos mayores 2021´, *Excelsior.* Mexico City. Available at: https://www.excelsior.com.mx/nacional/como-tramitar-la-pension-para-adultos-mayores-2021/1439778 (Accessed: 25-06-21).

Farmacias Similares (2017) *Farmacias Similares.* Available at: http://www.farmaciasdesimilares.com.mx/ui/buscador/empresa.aspx (Accessed: 01-07-17).

Fernández-Olano, C., Hidalgo, J., Cerdá-Díaz, R., Requena-Gallego, M., Sánchez-Castaño, C., Urbistondo-Cascales, L. and Otero-Puime, A. (2006) 'Factors Associated with Health Care Utilization by the Elderly in a Public Health Care System', *Health Policy*, 75, pp. 131-139.

Field, K. and Briggs, D. (2001) 'Socio-economic and Locational Determinants of Accessibility and Utilization of Primary Health-care', *Health & Social Care in the Community*, 9(5), pp. 294-308.

Field, A. (2018) Discovering Statistics using IBM SPSS Statistics (5th Edition). London: SAGE.

Fitzpatrick, A., Powe, N., Cooper, L., Ives, D. and Robbins, J. (2004) 'Barriers to Health Care Access Among the Elderly and who Perceives Them', *American Journal of Public Health*, 94(10), pp. 1788-1794.

Fox, G. and Murry, V. (2000) 'Gender and Families: Feminist Perspectives and Family Research', *Journal of Marriage and the Family*, 62(4), pp. 1160-1172.

Garcia-Ramirez, J., Nikoloski, Z. and Mossialos, E. (2020) 'Inequality in healthcare use among older people in Colombia', *International Journal for Equity in Health,* 19(1), pp. 1-15.

Garko, M. (1999) 'Existential Phenomenology and Feminist Research', *Psychology of Women Quarterly*, 23(1), pp. 167-175.

Ghotbi, N. (2013) 'Right to Health or the Human Right of Access to Essential Health-care', *Philosophy Study*, 3(6).

Giele, J. and Elder, G. (1998) *Methods of Life Course Research: Quantitative and Qualitative Approaches.* London: SAGE Publications Ltd.

Goins, R., Williams, K., Carter, M., Spencer, S. and Solovieva, T. (2005) 'Perceived Barriers to Health Care Access Among Rural Older Adults: a Qualitative Study', *The Journal of Rural Health,* 21(3), pp. 206-213.

Gold, M. (1998) 'Beyond Coverage and Supply: Measuring Access to Health-care in Today's Market', *Health Services Research,* 33(3 Pt. 2), pp. 625.

Gomes, C. (2007) 'Intergenerational Exchanges in Mexico: Types and Intensity of Support', *Current Sociology*, 55(4), pp. 545-560 and 642-643.

Gomez, F., Curcio, C. and Duque, G. (2009) 'Health Care for Older Persons in Colombia: A Country Profile'*, Journal of the American Geriatrics Society*, 57(9), pp. 1692-1696.

Gong, C., Kendig, H. and He, X. (2016) 'Factors Predicting Health Services Use Among Older People in China: An Analysis of the China Health and Retirement Longitudinal Study 2013', *BMC Health Services Research*, 16.

González-González, C. and Wong, R. (2014) 'Impacto de la Salud: Análisis Longitudinal del Empleo en Edad Media y Avanzada en México', *Papeles de Población,* 20(81), pp. 89-120.

González, C. and Triunfo, P. (2020) 'Horizontal inequity in the use and access to health care in Uruguay', *International Journal for Equity in Health*, 19(1), pp. 1-13.

Google (2018). Coahuila maps. Available at: https://www.google.co.uk/maps (Accessed: 10-06-18).

Government of Mexico (2008) *Ley General del Adulto Mayor.* Law. Government of Mexico.

Grant, M. and Behrman, J. (2010) 'Gender Gaps in Educational Attainment in Less Developed Countries', *Population and Development Review,* 36(1), pp. 71-89.

Greenfield, E.A., Black, K., Buffel, T. and Yeh, J. (2019) 'Community gerontology: A framework for research, policy, and practice on communities and aging', *The Gerontologist*, 59(5), pp. 803-810.

Grundy, E. and Read, S. (2012) 'Social Contacts and Receipt of Help Among Older People in England: Are There Benefits of Having More Children?', *Journal of Gerontology*, 67(6), pp. 742-754.

Gutiérrez, J., García-Saisó, S., Dolci, G. and Ávila, M. (2014) 'Effective Access to Health Care in Mexico', *BMC Health Services Research,* 14(1), pp. 186.

Hanson, M., Cooper, C., Aihie Sayer, A., Eendebak, R., Clough, G. and Beard, J. (2016) 'Developmental Aspects of a Life Course Approach to Healthy Ageing', *The Journal of Physiology.*

Harmon, C. and Nolan, B. (2001) 'Health Insurance and Health Services Utilization in Ireland', *Health Economics*, 10(2), pp. 135-145.

H. Congreso del Estado de Baja California (2017). Ley de los Derechos, Protección e Integración de las Personas Adultas Mayores en el Estado de Baja California. Available at: http://www.ordenjuridico.gob.mx/Documentos/Estatal/Baja%20California/wo105722.pdf (Accessed: 13-05-17).

Heinz, W. and Krüger, H. (2001) 'Life Course: Innovations and Challenges for Social Research', *Current Sociology,* 49(2), pp. 29-45.

Hesse-Bieber, S. (1998) 'Feminist Approaches to Mixed Methods Research: Linking theory and praxis. Applied Social Research Methods Series', *Handbook of Mixed Methods in Social & Behavioral Research,* 46.

Higgins, P. and Learn, C. (1999) 'Health Practices of Adult Hispanic Women', *Journal of Advanced Nursing,* 29(5), pp. 1105-1112.

Hillcoat-Nallétamby, S. (2014) 'The Meaning of "Independence" for Older People in Different Residential Settings', *The Journals of Gerontology, Series B,* 3(1), pp. 419-430.

Hossen, A. and Westhues, A. (2010) 'A Socially Excluded Space: Restrictions on Access to Health Care for Older Women in Rural Bangladesh', *Qualitative Health Research,* 20(9), pp. 1192-1201.

Hossen, A. and Westhues, A. (2011) 'Improving Access to Government Health Care in Rural Bangladesh: The Voice of Older Adult Women', *Health Care for Women International*, 32(12), pp. 1088-1110.

Hsia, J., Kemper, E., Sofaer, S., Bowen, D., Kiefe, C.I., Zapka, J., Mason, E., Lillington, L., Limacher, M. and Women's Health Initiative (2000) 'Is Insurance a More Important Determinant of Health-care Access than Perceived Health? Evidence from the Women's Health Initiative', *Journal of Women's Health & Gender-Based Medicine,* 9(8), pp. 881-889.

Hudson, E. and Nolan, A. (2015) 'Public Health-care Eligibility and the Utilisation of GP Services by Older People in Ireland', *The Journal of the Economics of Ageing,* 6, pp. 24-43.

Hupcey, J. (1998) 'Clarifying the Social Support Theory-Research Linkage', *Journal of Advanced Nursing,* 27(6), pp. 1231-1241.

Hussein, A. (2015) 'The use of Triangulation in Social Sciences Research: Can Qualitative and Quantitative Methods be Combined?', *Journal of Comparative Social Work,* 1(8), pp. 1-12.

Barrera, I. (2019) *Trabajadores de Pemex.* INDOCPUB. Available at: https://idoc.pub/documents/trabajadores-pemex-6klzr5drgv4g (Accessed: 04-06-21).

IMSS, ISSSTE and Secretaria de Salud y Gobiernos Estatales (2016) *Acuerdo Nacional Hacia la Universalización de los Servicios de Salud.* Available at: https://www.gob.mx/cms/uploads/attachment/file/77385/ACUERDO_NACIONAL_FIRMADO_7_ABRIL_2016.pdf (Accessed: 25-09-19).

Instituto Mexicano del Seguro Social (IMSS) (2018) *Tramites. Solicitud de Pension de Ascendientes.* Available at: http://imss.gob.mx/tramites/imss01005 (Accessed: 20-11-18).

Instituto Mexicano del Seguro Social (IMSS) (2018) *Conoce al IMSS.* Available at: http://www.imss.gob.mx/conoce-al-imss (Accessed: 24-10-19).

Instituto Mexicano del Seguro Social (IMSS) (2019) *Incorporación al Seguro de Salud para la Familia en el IMSS.* Available at: http://imss.gob.mx/tramites/imss02014 (Accessed: 26-09-19).

Instituto Mexicano del Seguro Social (IMSS) (2017) *Alta en Clínica o UMF.* Available at: http://www.imss.gob.mx/tramites/registro-umf (Accessed: 26-09-19).

Instituto Mexicano del Seguro Social (IMSS) (no date) *¿Tengo Derecho al Servicio Médico al Pensionarme?* Available at: http://imss.gob.mx/pensiones/preguntas-frecuentes/tengo-derecho-al-servicio-medico-al-pensionarme (Accessed: 27-09-19).

Instituto Mexicano del Seguro Social (IMSS) (2019) *Vales de Medicina.* Available at: http://www.imss.gob.mx/vales (Accessed: 20-08-19).

Instituto Mexicano del Seguro Social (IMSS) (2019) *IMSS-BIENESTAR.* Available at: http://www.imss.gob.mx/imss-bienestar (Accessed: 19-06-19).

Instituto Mexicano del Seguro Social (IMSS) (2018) *Seguro de Invalidez y Vida.* Available at: http://www.imss.gob.mx/sites/all/statics/pdf/informes/20152016/08-Cap04.pdf (Accessed: 21-11-18).

Instituto Mexicano del Seguro Social (IMSS) (2019) *Ley del Seguro Social.* Available at: http://www.imss.gob.mx/sites/all/statics/pdf/leyes/LSS.pdf (Accessed: 01-19-19).

Instituto Mexicano del Seguro Social (IMSS) (2016) *Homoclave: IMSS-02-066-G. Registro de Padre y/o Madre como Derechohabiente en el IMSS.* Available at:

https://www.gob.mx/imss/articulos/homoclave-imss-02-066-g?idiom=es (Accessed: 20-08-19).

Instituto Mexicano del Seguro Social (IMSS) (2016) *Solicitud de Pensión de Retiro, Cesantía en Edad Avanzada o Vejez a través de Transferencia de Derechos IMSS-ISSSTE.* Available at: http://www.imss.gob.mx/tramites/imss01022 (Accessed: 27-09-19).

Instituto Mexicano del Seguro Social (IMSS) (2015) *Programa de Vales de Medicamentos para Derechohabientes del IMSS e ISSSTE.* Available at: http://imss.gob.mx/prensa/archivo/201502/012 (Accessed: 20-08-19).

Instituto Mexicano del Seguro Social (IMSS) (no date) *Enfermedades Preexistentes y Enfermedades con Periodos de Espera.* Available at: http://www.imss.gob.mx/derechoH/enfermedad-seguros-familia (Accessed: 26-09-19).

Instituto Mexicano del Seguro Social (ISSSTE) (2017) *IMSS-BIENESTAR.* Available at: http://www.imss.gob.mx/imss-prospera (Accessed: 13-05-17).

Instituto Nacional de las Personas Adultas Mayores (INAPAM) (2016) *INAPAM*. Available at: https://www.gob.mx/inapam (Accessed: 21-09-16).

Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE) (2018) *Trámites del ISSSTE para trabajador, pensionado, jubilado o derechohabiente.* Available at: https://www.gob.mx/issste/acciones-y-programas/tramites-del-issste (Accessed: 21-11-18).

Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE) (2015) *Afiliación y Vigencia de Derechos.* Available at: https://www.gob.mx/issste/acciones-y-programas/afiliacion-y-vigencia-dederechos?fbclid=IwAR0QFDjI0tbxtT02sbGD1C85gv90ZqC1AhXZCi5XjE-n_zwBfKMiNT6vyFk (Accessed: 24-06-19).

Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE) (2015) *Registro de Familiares Ascendientes (padres, abuelos, bisabuelos, etc.) como derechohabientes del ISSSTE.* Available at: https://www.gob.mx/issste/acciones-y-programas/registro-de-familiares-ascendientes-padres-abuelos-bisabuelos-etc-como-derechohabientes-del-issste (Accessed: 20-08-19).

Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE) (no date) *Registro de Cónyuge como Derechohabiente del ISSSTE.* Available at: https://www.gob.mx/tramites/ficha/registro-de-conyuge-como-derechohabiente-del-issste/ISSSTE570 (Accessed: 01-10-19).

Jacobs-Lawson, J., Schumacher, M. and Webb, A. (2007) 'Gender Differences in Predictors of Late-life Health Insurance Knowledge', *Journal of Women & Aging*, 19(3-4), pp. 121-136.

Johnson, B. and Turner, L. (2003) 'Data Collection Strategies in Mixed Methods Research', *Handbook of mixed methods in social and behavioral research*, pp. 297-319.

Karas J., Angel J. and Angel R. (2009) 'Employment, Marriage, and Inequality in Health Insurance for Mexican-Origin Women', *National Institutes of Health,* 50(2), pp. 132–148.

Kitzinger, J. (1995) 'Qualitative Research. Introducing Focus Groups', *British Medical Journal,* 311(7000), pp. 299.

Komter, A. and Schans, D. (2008) 'Reciprocity Revisited: Give and take in Dutch and Immigrant Families', *Journal of Comparative Family Studies*, 39(2), pp. 279-298.

Komter, A. (1996) 'Reciprocity as a Principle of Exclusion', *Sociology*, 30, pp. 299-316.

Lai, D. and Surood, S. (2010) 'Types and Factor Structure of Barriers to Utilization of Health Services among Aging South Asians in Calgary, Canada', *Canadian Journal on Aging/Revue Canadienne du Vieillissement,* 29(2), pp. 249-258.

Lawton, L., Silverstein, M. and Bengtson, V. (1994) 'Affection, Social Contact and Geographical Distance between Adult Children and their Parents', *Journal of Marriage and the Family,* 56, pp. 57-68.

Leal-Fernández, G., Sánchez-Pérez, H., Cortés, L. and Leonel, J. (2016) 'Sobre la Propuesta de "universalidad" en Salud: Mercedes Juan y Enrique Peña Nieto', *Estudios Políticos*, (38), pp. 117-141.

Lemeshow, S. and Hosmer, J. (1982) 'A review of Goodness of fit Statistics for use in the Development of Logistic Regression Models', *American Journal of Epidemiology,* 115(1), pp. 92-106.

Litaker, D., Koroukian, S. and Love, T. (2005) ‘Context and Health-care Access. Looking Beyond the Individual’, *Medical Care,* 43(6), pp. 531-540.

Lo, T., Parkinson, L., Cunich, M. and Byles, J. (2016) ‘Factors Associated with the Health Care Cost in Older Australian Women with Arthritis: an Application of the Andersen's Behavioural Model of Health Services Use’, *Public Health,* 134, pp. 64-71.

Lowenstein, A., Katz, R. and Gur-Yaish, N. (2007) 'Reciprocity in Parent-Child Exchange and Life Satisfaction among the Elderly: A Cross-National Perspective', *Journal of Social Issues,* 63(4), pp. 865-883.

Luborsky, M. and Rubinstein, R. (1995) ‘Sampling in Qualitative Research: Rationale, Issues, and Methods’, *Research Aging,* 17(1), pp. 89-113.

Mamdani, M. and Bangser, M. (2004) ‘Poor People's Experiences of Health Services in Tanzania: a Literature Review’, *Reproductive Health Matters,* 12(24), pp. 138-153.

Mandel, H. and Semyonov, M. (2005) ‘Family Policies, Wage Structures, and Gender Gaps: Sources of Earnings Inequality in 20 Countries’, *American Sociological Review,* 70(6), pp. 949-967.

Marshall, M. (1996) ‘Sampling for Qualitative Research’, *Family Practice,* 13, pp. 522-525. http://dx.doi.org/10.1093/fampra/13.6.522.

Maurer, J. (2008) ‘Assessing Horizontal Equity in Medication Treatment Among Elderly Mexicans: Which Socioeconomic Determinants Matter Most?’ *Health Economics,* 17(10), pp. 1153-1169.

McCandless, N. and Conner, F. (1999) ’Older Women and the Health Care System: A Time for Change’, *Journal of Women & Aging,* 11(2-3), pp. 13-27.

McDonald, D., McDonald, C., Steinmetz, N., Enterline, E. and Salter, V. (1973) ‘Physician Service in Montreal before Universal Health Insurance’, *Medical Care*, 11(4), pp. 269-286.

McDonald, J. and Conde, H. (2010) ‘Does Geography Matter? The Health Service Use and Unmet Health Care Needs of Older Canadians’, *Canadian Journal on Aging-Revue Canadienne Du Vieillissement,* 29(1), pp. 23-37.

McLeroy, K., Bibeau, D., Steckler, A. and Glanz, K. (1988) 'An Ecological Perspective on Health Promotion Programs', *Health Education Quarterly,* 15(4), pp. 351-377. doi: 10.1177/109019818801500401.

Medicare (2016) *The Official U.S. Government Site for Medicare.* Available at: https://www.medicare.gov/ (Accessed: 08-09-16).

Makita, M. (2012) *Ageing experiences of old Mexican women*. PhD thesis. University of Glasgow.

Mein, G., Higgs, P., Ferrie, J. and Stansfeld, S. (1998) 'Paradigms of Retirement: The Importance of Health and Ageing in the Whitehall II Study', *Social Science & Medicine*, 47(4), pp. 535-545.

Mercedes, J., Alba, M., Valdés, C., González, E., Martínez, G., and Barraza, M. (2013) 'Universalidad de los Servicios de Salud en México'. *Salud Pública México.* Available at: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342013000600001&lng=es or http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342013000600001 (Accessed: 28-09-19).

Merton, K. (1975) 'Thematic Analysis in Science: Notes on Holton's Concept', *Science,* 188(4186), pp. 335-338.

Mexican Health and Ageing Study (MHAS) (2016) Mexican Health and Aging Study (MHAS) Available at: http://www.mhasweb.org/ (Accessed: 08-09-16).

Mexican Health and Aging Study (MHAS) (2016) 'Data Files and Documentation (public use)', *Mexican Health and Aging Study*. Available at: www.MHASweb.org (Accessed: 07-08-16).

Miller, N., Kirk, A., Alston, B. and Glos, L. (2014) 'Effects of Gender, Disability, and Age in the Receipt of Preventive Services', *Gerontologist,* 54(3), pp. 473-487.

Ministry of Health, Mexico, Secretaría de Salud (2018) *Se revisará padrón de IMSS, ISSSTE y Seguro Popular, para evitar la doble afiliación: Narro Robles.* Available at:

https://www.gob.mx/salud/prensa/se-revisara-padron-de-imss-issste-y-seguro-popular-para-evitar-la-doble-afiliacion-narro-robles (Accessed: 01-12-18).

Mroczek, D., Pitzer, L., Miller, L., Turiano, N. and Fingerman, K. (2011) 'The use of Secondary Data in Adult Development and Aging Research', *American Psychological Association*, pp. 121-132.

Naranjo, D. and Gameren, E. (2015) 'Precautionary Savings in Mexico: Evidence from the Mexican Health and Aging Study', *Review of Income and Wealth,* 62(2), pp. 334-362. doi: https://doi.org/10.1111/roiw.12164

National Institute of Statistics and Geography (INEGI) (2015) 'National Institute of Statistics and Geography INEGI', *INEGI*. Available at: http://www.inegi.org.mx/ (Accessed: 05-08-16).

National Institute of Statistics and Geography (INEGI) (2015) 'Perfil sociodemográfico de adultos mayores'. *INEGI*. Available at: http://internet.contenidos.inegi.org.mx/contenidos/productos//prod_serv/contenidos/espanol/bvinegi/productos/censos/poblacion/2010/perfil_socio/adultos/702825056643.pdf (Accessed: 25-06-21).

National Institute of Statistics and Geography (INEGI) (2016) 'Estadísticas a Propósito del dia de la Edad', *INEGI.* Available at: http://www.inegi.org.mx/saladeprensa/aproposito/2016/edad2016_0.pdf (Accessed: 30-03-17).

National Institute of Statistics and Geography (INEGI) (2017) 'National Institute of Statistics and Geography INEGI', *INEGI*. Available at: http://www3.inegi.org.mx/sistemas/sisept/default.aspx?t=msoc01&s=est&c=22594 (Accessed: 15-05-17).

National Institute of Statistics and Geography (INEGI) (2017) 'Estadísticas a Propósito del día de la Mujer', *INEGI.* Available at: http://www.inegi.org.mx/saladeprensa /aproposito/2017/mujer2017_Nal.pdf (Accessed: 24-06-17).

National Institute of Statistics and Geography (INEGI) (2017) 'Cuentame INEGI', *INEGI*. Available at: http://cuentame.inegi.org.mx/po blacion/myd.aspx?tema=P (Accessed: 24-09-17).

National Institute of Statistics and Geography (INEGI) (2019) 'Clima', *INEGI*. Available at: http://cuentame.inegi.org.mx/monografias/informacion/coah/territorio/clima.aspx?tema=me&e=05 (Accessed: 21-05-19).

National Institute of Statistics and Geography (INEGI) (no date) 'División Territorial de México', *INEGI.* Available at: http://cuentame.inegi.org.mx/territorio/division/default.aspx (Accessed: 05-10-19).

National Institute of Statistics and Geography (INEGI) (2020) 'Presentacion de resultados, Estados Unidos Mexicanos', *INEGI*. Available at: https://www.inegi.org.mx/contenidos/programas/ccpv/2020/doc/Censo2020_Principales_resultados_EUM.pdf (Accessed: 08-05-21).

National Institute of Statistics and Geography (INEGI) (2020) 'Comunicado de Prensa Núm. 450/20', *INEGI*. Available at: file:///C:/Users/mpcz1g14/Documents/Thesis%204th%20year/Last%20MHAS%20Literature/Enasem_2020.pdf (Accessed: 08-05-21).

National Institute of Statistics and Geography (INEGI) (2017) 'Estadísticas a Propósito de los Matrimonios', *INEGI*. Available at: http://www.inegi.org.mx/saladeprensa/aproposito/2017/matrimonios2017_Nal.pdf (Accessed: 24-09-17).

National Institute of Statistics and Geography (INEGI) (2017) 'Panorama de las Religiones en México 2010', *INEGI.* Available at: http://internet.contenidos.inegi.org.mx/contenidos/Productos/prod_serv/contenidos/espanol/bvinegi/productos/censos/poblacion/2010/panora_religion/religiones_2010.pdf (Accessed: 09-10-17).

National Institute of Statistics and Geography (INEGI) (2016) 'Distribución de la Población por Tamaño de Localidad y su Relación con el Medio Ambiente Nacional', *INEGI.* Available at: http://www.inegi.org.mx/eventos/2015/Poblacion/doc/p-WalterRangel.pdf (Accessed: 14-05-17).

National Institute of Statistics and Geography (INEGI) (2012) 'Mujeres y Hombres en México 2012', *INEGI.* Available at: http://cedoc.inmujeres.gob.mx/documentos_download/101215.pdf (Accessed: 14-05-17).

National Institute of Statistics and Geography (INEGI) (2012) 'Mujeres y Hombres en México 2007', *INEGI*, 11, 305-413. Available at: http://cedoc.inmujeres.gob.mx/documentos_download/101215.pdf (Accessed: 16-04-17).

National Institute of Statistics and Geography (INEGI) (2013) 'Mujeres y Hombres en México 2013', *INEGI,* 126. Available at: http://estadistica.inmujeres.gob.mx/myhpdf/75.pdf (Accessed: 16-09-17).

National Institute of Statistics and Geography (INEGI) (2015) 'Estadísticas a Propósito del día Internacional del Trabajo 1o de Mayo 21', *INEGI.* Available at: http://www.inegi.org.mx/saladeprensa/aproposito/2015/trabajo0.pdf (Accessed: 16-09-17).

Nemet, G. and Bailey, A. (2000) 'Distance and Healthcare Utilization Among the Rural Elderly', *Social Science & Medicine*, 50(9), pp. 1197-1208.

Nessa, A., Ameen, M., Ullah, S. and Kwak, K. (2008) 'Applicability of Telemedicine in Bangladesh: Current Status and Future Prospects. Convergence and Hybrid Information Technology, 2008', *ICCIT'08 Third International Conference on IEEE*, pp. 948-953.

Ng, J., Kaftarian, S., Tilson, W., Gorrell, P., Chen, X., Chesley, F. and Scholle, S. (2010) 'Self-Reported Delays in Receipt of Health Care among Women with Diabetes and Cardiovascular Conditions', *Women's Health Issues*, 20(5), pp. 316-322.

Nielsen-Bohlman, L., Panzer, A. and Kindig, D. (2004) *Health Literacy: a Prescription to end Confusion.* National Academies Press.

Noel-Miller, C. and Tfaily, R. (2009) 'Financial Transfers to Husbands' and Wives' Elderly Mothers in Mexico: Do Couples Exhibit Preferential Treatment by Lineage?' *Research on Aging,* 31(6), pp. 611-637.

Noordin, S. and Masrek, M. (2016) 'Adopting the Quantitative and Qualitative Methods in the Social Science Research: Justifying the Underpinning Philosophical Orientation', *Proceedings of the 28th International Business & Information Management Association (IBIMA) Conference Seville*. Spain, 9-10 November 2016.

Norris, G., Qureshi, F., Howitt, D. and Cramer, D. (2012) *Introduction to statistics with SPSS for social science*. Routledge.

Noticias Canal 10 (2014) 'Algunos ciudadanos se niegan a contestar el Censo Económico 2014', *INEGI*, 17 February. Available at: https://www.youtube.com/watch?v=WiYr421vpeo (Accessed: 21-08-19).

NotimexTV (2018) *El Seguro Popular ni es seguro ni es popular será remplazado: AMLO.* 14 December. Available at: https://www.youtube.com/watch?v=FlTI7pH5kbc (Accessed: 20-08-19).

NotimexTV (2019) *Sistema de salud, peor que el educativo: AMLO.* 23 May. Available at: https://www.youtube.com/watch?v=qh12c1Ai5hY (Accessed: 20-08-19).

Obrist, B., Iteba, N., Lengeler, C., Makemba, A., Mshana, C., Nathan, R., Alba, S., Dillip, A., Hetzel, M. and Mayumana, I. (2007) 'Access to Healthcare in Contexts of Livelihood Insecurity: a Framework for Analysis and Action', *PLoS Medicine*, 4(10), pp. e308.

Olaiz-Fernández, G., Rivera-Dommarco, J., Shamah-Levy, T., Rojas, R., Villalpando-Hernández, S., Hernández-Avila, M. and Sepúlveda-Amor, J. (2006) 'Encuesta Nacional de Salud y Nutrición 2006', *Instituto Nacional de Salud Pública*. Available at: https://ensanut.insp.mx/encuestas/ensanut2006/doctos/informes/ensanut2006.pdf (Accessed: 28-09-19).

Organisation for Economic Co-operation and Development (OECD) (2017) 'The Mexican Health Care System Has Made Great Progress During the Last Decade – but the Remaining Challenges are Daunting', *OECD*. Available at: http://www.oecd.org/newsroom/the-mexican-health-care-system-has-made-great-progress-during-the-last-decade-but-the-remaining-challenges-are-daunting.htm (Accessed: 02-06-17).

Orb, A., Eisenhauer, L. and Wynaden, D. (2001) 'Ethics in Qualitative Research', *Journal of Nursing Scholarship*, 33(1), pp. 93-96.

Ortega, L. and Armas, V. (2015) 'Policies and Costs of Health Care for Older Adults in Mexico' [PowerPoint presentation], *Seminar-Workshop Sistemas de apoyo formal e informal para personas adultas mayors en Mexico y Estados Unidos, El contexto de las reformas en salud y seguridad social.* Available at: http://www.geriatria.salud.gob.mx/descargas/publicaciones/ponencias-apoyo/08_LOPEZORTEGA_POLICIES_AND_COSTS.pdf (Accessed: 05-10-19).

Oxford Dictionary (2017) *Definition of 'dependent'.* Available at: https://en.oxforddictionaries.com/definition/dependent (Accessed: 21-03-17).

Oxford Dictionary (2017) *Definition of 'pocket'.* Available at: https://en.oxforddictionaries.com/definition/pocket (Accessed: 15-05-17).

Pagán, J., Puig, A. and Soldo, B. (2007) 'Health Insurance Coverage and the Use of Preventive Services by Mexican Adults', *Health Economics,* 16(12), pp. 1359-1369.

Palacio-Mejía, L., Lazcano-Ponce, E., Allen-Leigh, B. and Hernández-Ávila, M. (2009) 'Regional Differences in Breast and Cervical Cancer Mortality in Mexico between 1979 and 2006', *Salud Publica de Mexico*, 51, pp. s208-s219.

Palinkas, L., Horwitz, S., Green, C., Wisdom, J., Duan, N. and Hoagwood, K. (2015) 'Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research', *Administration and Policy in Mental Health*, 42(5), pp. 533-544.

Pamanes, R. (2016) 'Fortalecen Red de Consultorios Rurales en Ejidos de Arteaga', *El diario de Coahuila.* Available at: http://www.eldiariodecoahuila.com.mx/locales/2016/6/28/fortalecen-consultorios-rurales-ejidos-arteaga-587427.html (Accessed: 06-09-19).

Parker, S., Saenz, J., & Wong, R. (2015) 'Health Insurance and the Aging: Evidence from the Seguro Popular Program in Mexico'. *Demography*, 55(1), pp. 361-386. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5829015/pdf/nihms936618.pdf or doi:10.1007/s13524-017-0645-4 (Accessed: 03-10-19).

Parry, O., Thomson, C. and Fowkes, G. (1999) 'Life Course Data Collection: Qualitative Interviewing using the Life Grid', *Sociological Research Online,* 4(2).

Peace, S. (1990) *Researching social gerontology: Concepts, methods and issues.* Sage.

Pew Research Center (2017) 'Religion & Public Life', *Pew Research Center.* Available at: http://www.pewforum .org/religious-landscape-study/compare/age-distribution/by/christians/among/gender-composition/women/ (Accessed: 13-04-17).

Phillips, K., Morrison, K., Andersen, R. and Aday, L. (1998) 'Understanding the Context of Health-care Utilization: Assessing Environmental and Provider-related Variables in the Behavioural Model of Utilization', *Health Services Research,* 33(3 Pt. 1), pp. 571.

Puentes-Markides, C. (1992) 'Women and Access to Health Care', *Social Science & Medicine,* 35(4), pp. 619-626.

Puig, A., Pagán, J. and Soldo, B. (2006) 'Envejecimiento, Salud y Economía: la Encuesta Nacional sobre Salud y Envejecimiento en México', *El trimestre económico*, 73(2902), pp. 407.

Quiminet (2011) *Alta en el IMSS-Afiliación al IMSS y otros trámites.* Available at: https://www.quiminet.com/articulos/alta-en-el-imss-afiliacion-al-imss-y-otros-tramites-51060.htm (Accessed: 26-09-19).

Quizhpe, E., San Sebastian, M., Teran, E. and Pulkki-Brännström, A.M. (2020) 'Socioeconomic inequalities in women's access to health care: has Ecuadorian health reform been successful?' *International Journal for Equity in Health*, 19(1), pp. 1-10.

Ravindran, T. (2012) 'Universal Access: Making Health Systems Work for Women', *BMC Public Health,* 12(1), pp. S4.

Redondo-Sendino, Á., Guallar-Castillón, P., Banegas, J. and Rodríguez-Artalejo, F. (2006) 'Gender Differences in the Utilization of Health-care Services among the Older Adult Population of Spain', *BMC Public Health,* 6(1), pp. 1.

Rivera-Hernandez, M. and Galarraga, O. (2015) 'Type of Insurance and Use of Preventive Health Services Among Older Adults in Mexico', *Journal of Aging and Health*, 27(6), pp. 962-982.

Robertson, L. and Hale, B. (2011) 'Interviewing Older People; Relationships in Qualitative Research', *The Internet Journal of Allied Health Sciences and Practice,* 9(3), pp. 1-8.

Rodriguez-Galan, M. and Falcon, L. (2009) 'Perceived Problems with Access to Medical Care and Depression Among Older Puerto Ricans, Dominicans, Other Hispanics, and a Comparison Group of Non-Hispanic Whites', *Journal of Aging and Health,* 21(3), pp. 501-518.

Rodriguez, J. (2016) 'Desabasto de Medicamentos en Hospitales de Coahuila es por Problemas de Licitaciones', *Vanguardia*. Available at: https://vanguardia.com.mx/articulo/desabasto-de-medicamentos-en-hospitales-de-coahuila-es-por-problemas-de-licitaciones (Accessed: 25-06-19).

Rodriguez, R. (2017) 'En junio entra Sistema universal de salud: ssa', *El universal.* 17 May 2016. Available at: http://www.eluniversal.com.mx/articulo/nacion/sociedad/2016/05/17/en-junio-entra-sistema-universal-de-salud-ssa (Accessed: 18-07-17).

Ryan, G. (2018) 'Introduction to positivism, interpretivism and critical theory', *Nurse Researcher,* 25(4), pp. 41-49.

Ryvicker, M., Gallo, W. and Fahs, M. (2012) 'Environmental Factors Associated with Primary Care Access among Urban Older Adults', *Social Science & Medicine*, 75(5), pp. 914-921.

Salgado-De Snyder, V. and Wong, R. (2007) 'Gender and Poverty: Health Determinants in Old Age', *Salud Pública de México,* 49, pp. S515.

Salinas, J. (2015) 'Preventive Health Screening Utilization in Older Mexicans before and after Health-care Reform', *Salud Pública de México*, 57, pp. s70-s78.

Salinas, J., Al Snih, S., Markides, K., Ray, L. and Angel, R. (2010) 'The Rural–urban Divide: Health Services Utilization among older Mexicans in Mexico', *The Journal of Rural Health*, 26(4), pp. 333-341.

Sanchez, M. (2015) *El ISSSTE da 4.6 mil Millones en Vales para Farmacias Privadas Mientras Abandona las Suyas.* Available at: https://www.sinembargo.mx/17-03-2015/1282560 (Accessed: 20-08-19).

Sanjel, S., Khanal, K., Mudbhari, N. and Risal, A. (2012) 'The Utilization of Health Care Services and their Determinants among the Elderly Population of Dhulikhel Municipality, Kathmandu', *University Medical Journal,* 10(37), pp. 34-39.

Schoen, C., Osborn, R., Doty, M., Bishop, M., Peugh, J. and Murukutla, N. (2007) 'Toward Higher-Performance Health Systems: Adults' Health Care Experiences in Seven Countries, 2007', *Health Affairs*, 26(6), pp. w717-w734.

Schumacher, J., Smith, M., Liou, J. and Pandhi, N. (2009) 'Insurance Disruption due to Spousal Medicare Transitions: Implications for Access to Care and Health Care Utilization for Women Approaching Age 65', *Health Services Research,* 44(3), pp. 946-964.

Secretaria de Desarrollo Social (2016) *Pensión para Adultos Mayores.* Available at: http://www.gob.mx/sedesol/acciones-y-programas/pension-para-adultos-mayores (Accessed: 21-09-16).

Secretaria de Salud, Gobierno de Baja California Sur (2016) *Secretaria de Salud, Gobierno de Baja California Sur.* Available at: http://www.saludbcs.gob.mx/Caravanas.html (Accessed: 13-11-16).

Secretaria de Salud (2021) *Official website.* Available at: https://www.gob.mx/salud (Accessed: 13-08-19).

Secretaria de Marina (SEMAR) (2008) 'Afiliación y Prestaciones', *SEMAR*. Available at: http://2006-2012.semar.gob.mx/informacion-sector/tramites/seguridad-y-bienestar-social/afiliacion.html (Accessed: 28-09-19).

Seguro Popular (no date) *Seguro Popular.* Available at: http://www.seguropopular.org/ (Accessed: 12-10-19).

Seguro Popular (2021) *Plataforma de información.* Available at: https://plataformadeinformacion.com/seguro-popular/ (Accessed: 18-07-21).

Selli, K., Czabanowska, K., Danusevičienė, L., Butkevičienė, R., Jurkuvienė, R. and Overall, J. (2016) 'Discrimination of Elderly Patients in the Health Care System of Lithuania', *South Eastern European Journal of Public Health (SEEJPH)*.

Silva, A. and Campos, B., 2007. 'Familism', *The Blackwell Encyclopedia of Sociology*, pp.1-6.

Silverman, D. (2005) *Doing Qualitative Research* (2nd Edition). London: SAGE.

Silverman, D. (2013) *Doing qualitative research: A practical handbook.* London: SAGE Publications Limited.

Silverstein, M., Bengtson, V. and Putnam, M. (2008) *Handbook of Theories of Aging* (2nd Edition). Springer Publishing Company LLC.

Silverstein, M., Conroy, S., Wang, H., Giarrusso, R., & Bengtson, V. (2002) 'Reciprocity in Parent-Child Relations over the Adult Life Course', *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences,* 57B(1), pp. S3-S13.

Silverstein, M., Gans, D. and Yang, F. (2006) 'Intergenerational Support to Aging Parents: The Role of Norms and Needs', *Journal of Family Issues*, 27(8), pp. 1068-1084.

Silverstein, M., Parrott, T. and Bengtson, V. (1995) 'Factors that Predispose Middle-aged Sons and Daughters to Provide Social Support to Older Parents', *Journal of Marriage and the Family*, 57, pp. 465-475.

Sin, C. (2006) 'Expectations of Support among White British and Asian-Indian Older People in Britain: the Interdependence of Formal and Informal Spheres', *Health & Social Care in the Community,* 14(3), pp. 215-224.

Smith, K. and Goldman, N. (2007) 'Socioeconomic Differences in Health Among Older Adults in Mexico', *Social Science & Medicine,* 65(7), pp. 1372-1385.

Smyer, M and Hofland, B. (1982) 'Divorce and family support in later life: Emerging concerns', *Journal of Family Issues,* 3(1), pp. 61-77.

Sommers, A. (2006) 'Access to Health Insurance, Barriers to Care, and Service Use Among Adults with Disabilities', *Inquiry: the Journal of Health Care Organization Provision and Financing,* 43(4), pp. 393-405.

Stone, J., Evandrou, M., Falkingham, J. and Vlachantoni, A. (2015) 'Women's Economic Activity Trajectories Over the Life Course: Implications for the Self-rated Health of

Women Aged 64+ in England', *Journal of Epidemiology and Community Health*, 69(9), pp. 873-879.

Sudore, R., Mehta, K., Simonsick, E., Harris, T., Newman, A., Satterfield, S., Rosano, C., Rooks, R., Rubin, S., Ayonayon, H. and Yaffe, K. (2006) 'Limited Literacy in Older People and Disparities in Health and Health-care Access', *Journal of the American Geriatrics Society,* 54(5), pp. 770-776.

Sule, S., Ijadunola, K., Onayade, A., Fatusi, A., Soetan, R. and Connell, F. (2008) 'Utilization of Primary Health care Facilities: Lessons from a Rural Community in Southwest Nigeria', *Nigerian Journal of Medicine,* 17(1), pp. 98-106.

Syed, S., Gerber, B. and Sharp, L. (2013) 'Traveling towards Disease: Transportation Barriers to Health Care Access', *Journal of Community Health,* 38(5), pp. 976-993.

Tannenbaum, C., Nasmith, L. and Mayo, N. (2003) 'Understanding Older Women's Health Care Concerns: A Qualitative Study', *Journal of Women & Aging*, 15(1), pp. 3-16.

Tashakkori, A., Teddlie, C. and Teddlie, C.B. (1998) *Mixed methodology: Combining qualitative and quantitative approaches* (Vol. 46). SAGE.

Tashakkori, A. and Teddlie, C. (eds.) (2010) *SAGE handbook of mixed methods in social & behavioral research* (2nd Edition). Thousand Oaks, California: SAGE Publications.

Taylor, D. and Hoenig, H. (2006) 'Access to Health Care Services for the Disabled Elderly', *Health Services Research,* 41(3), pp. 743-758.

Teng, Y., Teng, J., Lee, M., Hsieh, M., Chen, Y., Lin, J. and Lee, M. (2013) 'Determinants of Emergency Medical Utilization among the Elderly Population in Taiwan: A National Longitudinal Cohort Study', *Archives of Gerontology and Geriatrics*, 56(2), pp. 364-369.

Thomas, S., Heck, R. and Bauer, K. (2005) 'Weighting and Adjusting for Design Effects in Secondary Data Analyses', *New Directions for Institutional Research,* 2005(127), pp. 51-72.

Tilburg, T. (1999) 'Losing and gaining in old age: Changes in personal network size and social support in a four-year longitudinal study', *Zeitschrift fuer Gerontologie und Geriatrie,* pp. 107-107.

Toribio, L. (2018) 'IMSS Absorberá el Seguro Popular; harán Cambio Gradual', *Excelsior.* Available at: https://www.excelsior.com.mx/nacional/imss-absorbera-el-seguro-popular-haran-cambio-gradual/1282463 (Accessed: 17-08-19).

Townsend, P. (1981) 'The Structured Dependency of the Elderly: a Creation of Social Policy in the Twentieth Century', *Ageing and Society,* 1(1), pp. 5-28.

Treviño-Siller, S., Pelcastre-Villafuerte, B. and Márquez-Serrano, M. (2006) 'Experiencias de Envejecimiento en el México Rural', *Salud Pública de México,* 48, pp. 30-38.

Uehara, E. (1990) 'Dual Exchange Theory, Social Networks, and Informal Social Support', *American Journal of Sociology*, 96(3), pp. 521-557.

Umberson, D., Pudrovska, T. and Reczek, C. (2010) 'Parenthood, Childlessness and Well-being: A Life Course Perspective', *Journal of Family and Marriage*, 72(3), pp. 612-629.

United Nations (2016) *Universal Declaration of Human Rights.* Available at: http://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf (Accessed: 30-11-16).

University of Southampton (2017) *Policy on the Ethical Conduct of Studies involving Human Participants.* Available at: https://www.southampton.ac.uk/about/governance/policies/ethics.page (Accessed: 10-06-19).

Vadla, R., Božikov, J., Åkerström, B., Cheung, W.-Y., Kovačić, L., Masanovic, M., Merilainen, S., Mihel, S., Nummelin-Niemi, H. and Stefanaki, I. (2011) 'Differences in Health-care Service Utilisation in Elderly, Registered in Eight Districts of Five European Countries', *Scandinavian Journal of Public Health,* 39(3), pp. 272-279.

Van, G. and Velandia Naranjo, D. (2015) 'Working and Caring: The Simultaneous Decision of Labor Force Participation and Informal Elderly and Child Support Activities in Mexico', *Latin American Journal of Economics*, 52(2), pp. 117-148. Available at: https://scielo.conicyt.cl/pdf/laje/v52n2/art01.pdf (Accessed: 01-10-19).

Varley, A. and Blasco, M. (2000) 'Intact or in tatters? Family care of older women and men in urban Mexico', *Gender & Development,* 8(2), pp. 47-55.

Varley, A. and Blasco, M. (2003) 'Older Women's Living Arrangements and Family Relationships in Urban Mexico Women's Studies International Forum', *Elsevier,* pp. 525-539.

Victor, C. (2005). *The Social Context of Ageing. A Textbook of Gerontology.* Oxon: Routledge, p. 358.

Villegas, S., de Oca Zavala, V. and Guillén, J. (2014) 'Social Support and Social Networks among the Elderly in Mexico', *Journal of Population Ageing,* 7(2), pp. 143-159. Available at: https://pdfs.semanticscholar.org/57c3/7b284076e1ee348051d137eb6896194d58d4.pdf (Accessed: 02-10-19).

Wallace, S. and Gutiérrez, V. (2005) 'Equity of Access to Health Care for Older Adults in Four Major Latin American Cities', *Revista Panamericana de Salud Pública.* 17. pp. 5-6.

Walter, T., and Davie, G. (1998) 'The Religiosity of Women in the Modern West', *British Journal of Sociology*, 49(4), pp. 640-660.

Wandera, S., Kwagala, B. and Ntozi, J. (2015) 'Determinants of Access to Health-care by Older Persons in Uganda: a Cross-sectional Study', *International Journal for Equity in Health,* 14(1), pp. 1-10.

Wanless, D., Mitchell, B. and Wister, A. (2010) 'Social Determinants of Health for Older Women in Canada: Does Rural-Urban Residency Matter?', *Canadian Journal on Aging-Revue Canadienne Du Vieillissement,* 29(2), pp. 233-247.

Watkins, M.M., Gabali, C., Winkleby, M., Gaona, E. and Lebaron, S. (2002) 'Barriers to cervical cancer screening in rural Mexico', *International Journal of Gynecologic Cancer*, 12(5).

Wendt, C., Mischke, M., Pfeifer, M. and Reibling, N. (2012) 'Confidence in Receiving Medical Care when Seriously Ill: a Seven-Country Comparison of the Impact of Cost Barriers', *Health Expectations,* 15(2), pp. 212-224.

Wenger, G., Scott, A. and Patterson, N. (2000) 'How Important is Parenthood? Childlessness and Support in Old Age in England', *Ageing and Society*, 20(2), pp. 161-182.

Willging, C.E., Sommerfeld, D.H., Jaramillo, E.T., Lujan, E., Bly, R.S., Debenport, E.K., Verney, S. and Lujan, R. (2018) 'Improving Native American elder access to and use of health care through effective health system navigation', *BMC Health Services Research*, 18(1), pp. 464.

Willis, R., Glaser, K. and Price, D. (2010) 'Applying the Andersen Behavioural Model to Informal Support among Britain's Ethnic Minorities', *Generations Review, British Society of Gerontology,* 20.

Wilson, G. (1997) 'A Postmodern Approach to Structured Dependency Theory', *Journal of Social Policy*, 26(3), pp. 341-350.

Wodchis, W., Dixon, A., Anderson, G. and Goodwin, N. (2015) 'Integrating Care for Older People with Complex Needs: Key Insights and Lessons from a Seven-Country Cross-Case Analysis', *International Journal of Integrated Care*, 15.

Wolff, J. and Spillman, B. (2014) 'Older adults receiving assistance with physician visits and prescribed medications and their family caregivers: prevalence, characteristics, and hours of care', *Journals of Gerontology Series B: Psychological Sciences and Social Sciences,* 69(Suppl_1), pp. S65-S72.

Wong, R. and Degraff, D. (2007) 'Old-age Wealth in Mexico: the Role of Early-life Reproductive and Human Capital Decisions', *Population Association of America 2007 Annual Meeting.* New York, New York, 29-31 March 2007. Extended abstract [unpublished].

Wong, R., Díaz, J. and Higgins, M. (2006) 'Health Care Use among Elderly Mexicans in the United States and Mexico and the Role of Health Insurance', *Research on Aging*, 28(3), pp. 393-408.

Wong, R. and Díaz, J. (2007) 'Health Care Utilization among older Mexicans: Health and Socioeconomic Inequalities', *Salud Pública de México,* 49, pp. s505-s514.

Wong, R., Espinoza, M. and Palloni, A. (2007) 'Mexican Older Adults with a Wide Socioeconomic Perspective: Health and Aging', *Salud Pública de México,* 49, pp. s436-s447.

Wong, R., Michaels-Obregón, A., Palloni, A., Gutiérrez-Robledo, L., González-González, C., López-Ortega, M., Téllez-Rojo, M. and Mendoza-Alvarado, L. (2015) 'Progression of Aging in Mexico: the Mexican Health and Aging Study (MHAS) 2012', *Salud Pública de México*, 57, pp. s79-s89.

World Bank Organization (2020) *Data for low & middle income, Mexico.* Available at: https://data.worldbank.org/?locations=XO-MX (Accessed: 09-10-20).

World Health Organization (2017) *Global Strategy and Action Plan on Ageing and Health.* Available at: file://filestore.soton.ac.uk/users/mpcz1g14/mydocuments/HERE%20(most%20recent)/Documents/Thesis%204th%20year/Not%20useful%20anymore/WHO-GSAP-2017.pdf (Accessed: 18-06-19).

World Health Organization (2011) *Women and health in the Western Pacific Region: Remaining Challenges and New Opportunities.* Manila: WHO Regional Office for the Western Pacific.

World Life Expectancy (2019) World life expectancy, Available at: http://www.worldlifeexpectancy.com (Accessed: 21-01-19).

Xu, X., Patel, D., Vahratian, A. and Ransom, S. (2006) 'Insurance Coverage and Health Care Use among Near-elderly Women', *Women's Health Issues*, 16(3), pp. 139-148.

Yam, H., Mercer, S., Wong, L., Chan, W. and Yeoh, E. (2009) 'Public and Private Health-care Services Utilization by Non-institutional Elderly in Hong Kong: Is the Inverse Care Law Operating?', *Health Policy,* 91(3), pp. 229-238.

Yawen, L., Chi, I., Kaiti, Z. and Ping, G. (2006) 'Comparison of Health Services Use by Chinese Urban and Rural Older Adults in Yunnan Province', *Geriatrics & Gerontology International,* 6(4), pp. 260-269.

Young, A., Dobson, A. and Byles, J. (2001) 'Determinants of General Practitioner Use among Women in Australia', *Social Science & Medicine,* 53(12), pp. 1641-1651.

Zavala, V. and Caballero, L. (2014) *Vejez, Salud y Sociedad en México Aproximaciones Disciplinarias desde Perspectivas Cuantitativas y Cualitativas.* Universidad Nacional Autónoma de México/Secretaría de Desarrollo Institucional. 440 pages.

Zeinab, Z., Samah, B., Zobidah, O., Bolong, J. and Shaffril, H. (2014) 'A Systematic Review of Qualitative Research on the Role of ICTs in Sustainable Livelihood', *The Social Sciences,* 9(6), pp. 386-401.