Health Care Professional barriers and facilitators to discontinuing antidepressant use: a systematic review and thematic synthesis

Abstract

Introduction

Long-term antidepressant (AD) use, much longer than recommended, is very common and can lead to potential harms.

Objective

To investigate the existing literature on perspectives of health professionals (HPs) regarding long-term AD treatment, focusing on barriers and facilitators to discontinuation.

Methods

A systematic review with thematic synthesis. Eight electronic databases were searched until August 2023 including MEDLINE, PubMed, Embase, PsycINFO, CINAHL, AMED, Health Management Information Consortium, and the Networked Digital Library of Theses and Dissertation.

Results

Thirteen studies were included in the review. Of these, nine focused on general practitioner perspectives, one on psychiatrist perspectives, and three on a mix of HPs perspectives. Barriers and facilitators to discontinuing long-term ADs emerged within eight themes, ordered chronologically based on HP considerations during an AD review: perception of AD use, fears, HP role and responsibility, HPs' perception of AD discontinuation, HPs' confidence regarding their ability to manage discontinuation, perceived patient readiness to stop, support from patient's trusted people, and support from other HPs.

Limitations

Coding and development of subthemes and themes was performed by one researcher and further developed through discussion within the research team.

Conclusion

Deprescribing long-term ADs is a challenging concept for HPs. The review found evidence that the barriers far outweigh the facilitators with fear of relapse as a main barrier. HP education, reassurance and confidence-building is essential to increase the initiation of the discontinuation process. Further

research into the perspectives of pharmacists and mental health workers is needed as well as exploring the role of trusted people.

Title page

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Health Care Professional barriers and facilitators to discontinuing antidepressant use: a systematic review and thematic synthesis

1. Introduction

Long-term antidepressant (AD) use is common and rising , with a median length of treatment of more than two years in the UK (Johnson et al. 2012; Petty et al. 2006) and five years in the USA (Mojtabai and Olfson 2014; Pratt et al. 2017) Most AD use is for depression and anxiety rather than other indications, with an extensive overlap between both (Magpie 2003). General Practitioners (GPs) prescribe nearly all ADs (AIHW 2022; RIZIV-INAMI 2023), with some ADs initiated by a specialist, predominantly psychiatrists.

Longer duration of AD treatment, much longer than the recommended in guidelines (APA ; NICE 2022), is driving much of the rise in AD use (Kendrick et al. 2015; Moore et al. 2009). Although some people need long-term AD to reduce the risk of relapse and recurrence, many long-term users in primary care no longer benefit from AD use and could stop without relapse as long as they are monitored, and treatment is restarted if necessary (Mangin et al. 2016). The UK ANTLER trial of discontinuation of AD among patients with recurrent depression and thus at higher risk of relapse, found that after AD treatment for nine months or longer 47% of the patients in the discontinuation group was able to taper off without relapse or restarting the AD at 12 months follow-up (Lewis et al. 2021).

AD use that is not discontinued after the recommended duration can lead to possible harm and generate unnecessary costs in drugs and medical follow-up. Possible adverse events of AD include sleep disturbance, weight gain, gastro-intestinal problems, sexual problems and rarely bleeding (Coupland et al. 2011; Ferguson 2001).These risks persist over years (Bet et al. 2013). AD use may also impair patients' autonomy and resilience, and may increase patients' dependence on medication (Kendrick 2015), alongside feeling emotionally numb (Goodwin et al. 2017).

Successful discontinuation of ADs relies on patient- and doctor-related factors (Maund et al. 2019). However, (dis)continuation of long-term AD doesn't occur in isolation but within an interdisciplinary context with other healthcare professionals (HPs) such as psychotherapists, psychiatrists, pharmacists, nurses and social workers who also influence the discontinuation process.

Understanding HP views and the factors influencing their decisions is crucial for developing safe and effective interventions to improve the discontinuation of long-term AD. Moreover, patients often see

their GP as responsible for initiating discussions about discontinuation, but support from other HPs can also play a significant role in helping them through the process (Maund et al. 2019; Van Leeuwen et al. 2022a). In 2019, a review and thematic synthesis of HP and patient barriers and facilitators to discontinuing long-term AD was published; however, conducting a thematic synthesis for the HP perspectives was not possible due to insufficient data (Maund et al. 2019). A narrative review by Scholten summarised barriers and facilitators to discontinuing AD, however, not all relevant primary qualitative studies of HP perspectives were included (Scholten et al. 2020). Another relevant study using concept mapping explored the topics most relevant to the discontinuation process, based on perspectives of both patients and HPs (Wentink et al. 2019). While this study is useful for creating a concept decision-aid to support the shared decision-making process, a comprehensive understanding of the variation in opinions and experiences of HPs is required to tailor future interventions to individual HPs (Michie et al. 2011).

Given the recent small but growing body of research exploring HP views regarding long-term AD (dis)continuation, we conducted an update of the systematic review and thematic synthesis of qualitative studies to further investigate the HP perspectives on discontinuation of long-term AD.

2. Methods

2.1 Protocol and registration

The review protocol was registered with the PROSPERO International Prospective Register of Systematic reviews (http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016053941)

2.2 Eligibility criteria

We included primary studies that: (1) used qualitative data collection (e.g. interviews, focus groups) and analysis, including qualitative components of mixed methods studies, and (2) had data, regardless of study aims, on attitudes, beliefs, feelings, and perceptions of HPs on continuing or discontinuing AD use, with particular focus on barriers and facilitators to discontinuation. We did not restrict type of HP (e.g. general practitioners, nurses, psychiatrists, pharmacists, primary care mental health workers, psychotherapists, nursing home staff) or setting.

We excluded studies that: (1) used survey data, including open responses to survey questions, (2) defined continuation or discontinuation of treatment in terms of adherence or non-adherence in the initial stage of treatment only (less than 6 months), or (3) were not published in English.

2.3 Search strategy and sources

We searched the following databases from inception until 10 May 2022: MEDLINE, PubMed, Embase , PsycINFO, CINAHL, AMED, Health Management Information Consortium (but this database closed on 31 March 2022), and the Networked Digital Library of Theses and Dissertations. OpenGrey was not searched as this database closed in December 2020. Updated searches were undertaken in August 2023.

The MEDLINE search strategy (Appendix A) was developed by an experienced health librarian (Maund et al. 2019). The strategy consisted of terms and text words of ADs and discontinuation, and a modified qualitative research filter (DeJean et al. 2016). This strategy was then adapted by one researcher (EM) for the remaining databases. We also performed citation searching and reference list checking for full papers meeting the inclusion criteria from our initial database searches. Updated searches were undertaken in August 2023.

2.4 Study Selection

One researcher (EVL) screened all titles and abstracts yielded by searches against inclusion criteria. One researcher (EM) screened a sample (50%) of titles and abstracts each. We obtained full papers for all titles and abstracts appearing to meet inclusion criteria or where there was uncertainty. Two researchers (EVL and EM) then independently assessed whether these full papers met the inclusion criteria. Any disagreements were resolved by discussion.

2.5 Data collection/extraction process

Data extraction was performed into a standardised form created in Excel by one researcher (EVL) and checked by one researcher (EM). Data extracted included: research setting, aims of study, theoretical background, sampling approach, participant characteristics, data collection methods, data analysis approach, and main findings.

2.6 Assessment of study quality

Each study was assessed against the CASP criteria for qualitative research (Critical Appraisal Skills Programme, 2017). We also used COREQ in this review. Assessment of study quality was performed by one reviewer (EVL) and checked by one reviewer (EM), with any disagreements resolved by discussion. A priori we decided not to exclude studies from the review or analysis based on their assessed quality (Carroll and Booth 2015).

2.7 Data synthesis

We conducted a thematic synthesis to synthesise findings (Thomas and Harden 2008). All included papers were imported into NVivo (version R1 2020). Following multiple readings to achieve immersion, one researcher (EVL), GP & clinical pharmacologist and experienced qualitative researcher, performed line by line coding of participants' views and authors' interpretation of their study findings that touched on continuing or discontinuing AD use, regardless of where they were located in the paper. Papers were coded in order of publication, beginning with the oldest. Codes, sub-themes and themes were developed iteratively as papers were analysed. Sub-themes and themes were further developed and refined through discussions in the study team. The themes were ordered chronologically according to the considerations that HPs might make at each step when they review a patient's long-term AD treatment.

3. Findings

3.1 Study Selection

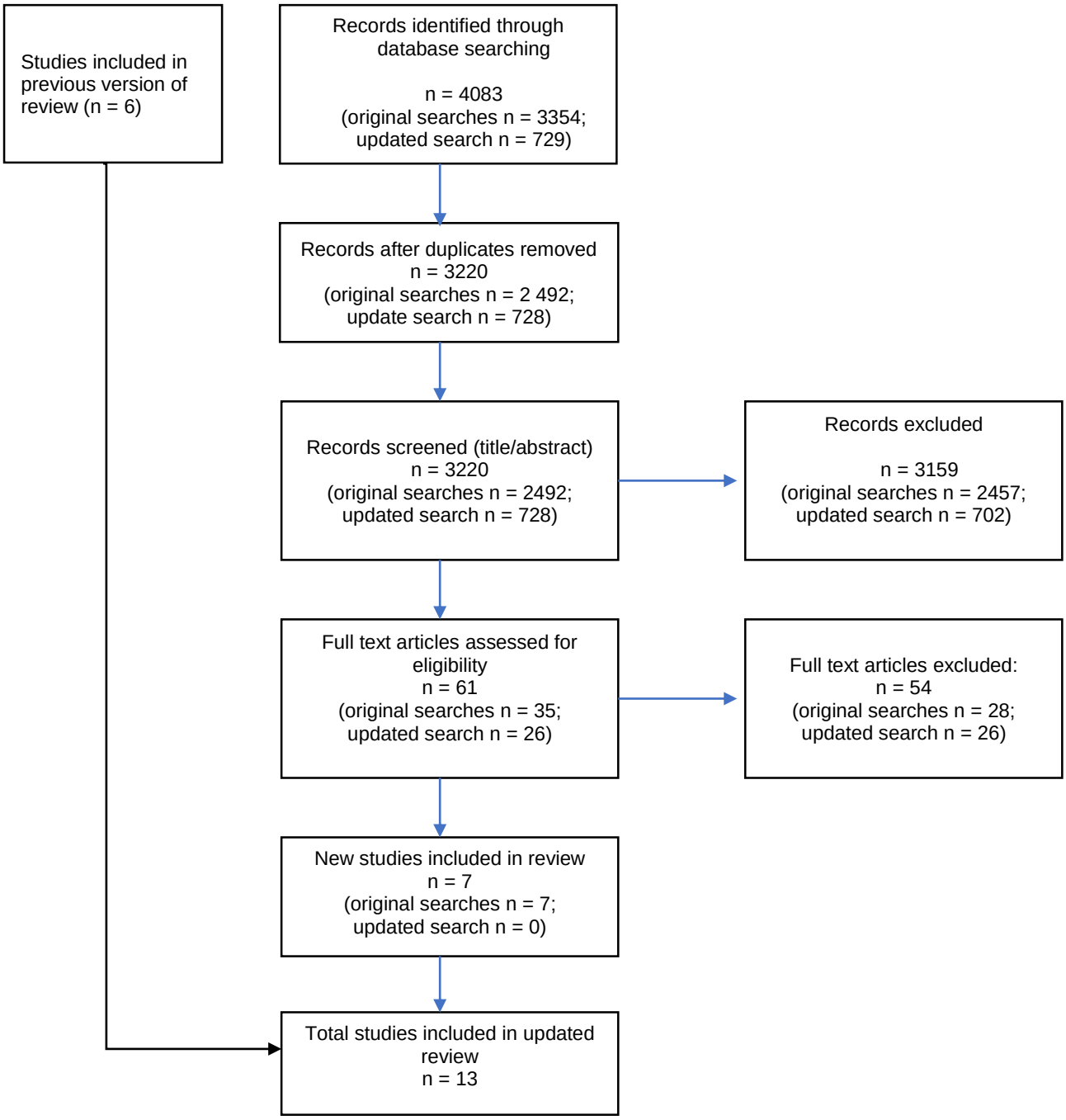
The 2019 review included six studies of HP perspectives on discontinuing AD (Bosman et al. 2016; Dickinson et al. 2010; Iden et al. 2011; Johnson et al. 2017; Johnston et al. 2007; Pollack and Grime 2002) (Fig. 1 Flowchart of search and review of eligible studies). The updated search in May 2022 identified 3354 new unique records, including 2492 new unique record after deduplication. Of these, 2457 were ineligible after review of title and abstract. We assessed 35 full-text articles for eligibility, and 27 were excluded after assessment of full papers (no primary study using qualitative data collection n= 16, no data on continuing or discontinuing AD use n=7, foreign languages (Dutch, French) n=3, and 1 was already included in the 2019 review). For this update, we added seven additional primary qualitative studies (Bowers et al. 2019; Donald et al. 2021; Huijbers et al. 2020; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020). The updated search yielded 728 unique records. Of these, 702 were ineligible after reviews of titles and abstracts. Of the 26 full papers assessed, 26 were excluded (no primary study using qualitative data collection n=23, no data on continuing or discontinuing AD use n=3).

A total of 13 papers reporting 13 studies were therefore included in the updated review (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Huijbers et al. 2020; Iden et al. 2011; Johnson et al. 2017; Johnston et al. 2007; Kelly et al. 2021; Pollack and Grime 2002; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

3.2 Study characteristics

Characteristics of the 13 included studies are presented in appendix B. Studies dated from 2002-2022; of which 7 were from 2019-2022. All studies were conducted in seven countries: Australia, Belgium,

Fig 1. Flowchart of search and review of eligible studies



Ireland, Netherlands, Norway, UK, and USA. Five studies were of GP perspectives only (Donald et al. 2021; Johnson et al. 2017; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021) (including one of GPs working in nursing homes (Van Leeuwen et al. 2022b), one study of psychiatrist perspectives only (Vaswani Bye 2020), 3 studies with a mix of HP perspectives (one of GPs and nurses working in nursing homes (Iden et al. 2011), one study with a wide variety of HPs (GPs, GP assistants, community health workers, psychotherapists) (Bowers et al. 2019), one of psychiatrists, physicians and patients perspectives (Huijbers et al. 2020), and four studies were of GP and patient perspectives (Bosman et al. 2016; Dickinson et al. 2010; Johnston et al. 2007; Pollack and Grime 2002). One study focused on HPs' views on discontinuation in older people (Dickinson et al. 2010) and two studies on discontinuation in nursing homes (Iden et al. 2011; Van Leeuwen et al. 2022b). Twelve studies were individual qualitative studies, and one study was a mixed methods study with a qualitative component exploring physicians' barriers and facilitators of discontinuation after Mindfulness-Based Cognitive Therapy (Huijbers et al. 2020). Eleven studies were reported in journal articles, one as a final report of a research fellowship (Pollack and Grime 2002) and one in a Doctor of Clinical Psychology thesis (Vaswani Bye 2020).

3.3 Quality assessment

Assessed against the CASP criteria (Appendix C), all 13 studies had a clear statement of aims for which qualitative methodology was appropriate, and all were considered valuable research. Assessed against the 32 item COREQ checklist, reporting varied across the studies (Appendix D). All 13 studies reported sample size, description of sample, use of interview guide, and had consistency between data and reported findings. Of the 13, one study used the data of the HPs' perspectives to triangulate patient's perspectives, and did not include quotations (Huijbers et al. 2020).

3.4 Synthesis of results

Thematic synthesis yielded 8 themes, and 49 subthemes (see Fig. 2). These themes are listed below, chronologically according to the considerations that HPs make at each step when they review a long-term AD:

1. Perception of AD
2. Fears
3. HP role and responsibility
4. HPs' perceptions of AD discontinuation
5. HPs' confidence in their ability to manage discontinuation
6. Perceived patient readiness to stop
7. Support from trusted people
8. Support from other HPs

Fig 2: Subthemes of barriers and facilitators associated with each analytical theme

Themes	Barriers(subthemes)	Facilitators (subthemes)
Perception of antidepressant use	Still effective	No added value in older people with dementia/severe health problems
	Ambivalence/uncertainty about effect in older adults, but benefit of the doubt	
	Lack of safety concerns, also about use in older people	Clear harm from the antidepressant: patient experiencing side effects
	Cause of depression – biochemical	Cause of depression- seasonal/intermittent need/life circumstances
Fears	Risk of destabilisation and relapse	Risk of serious harm from continuing the antidepressant due to a new health related issue
	Risk of winter/seasonal impact	
	Risk of suicide	
	Risk of withdrawal symptoms - nocebo effect	
Health Professional role and responsibility	Devolvement of responsibility:	Health Professionals own responsibility to initiate discussions about discontinuation
	1)Health Professional to patient (or trusted person) 2)Health Professional to other prescriber (initial prescriber or practice colleague, psychiatrist)	
	3)Health Professional to beyond clinical practice (pharmaceutical industry, social and policy environment)	
	Split care	Involvement in the initial antidepressant prescription Knowledge of the patient and continuity
Health Professionals' perceptions of antidepressant discontinuation	Discontinuation is a low priority	Discontinuation brings benefits for the patient
	Futility of discontinuation at older age	Rewarding task for the health professional
	Stopping is difficult	
	Time and energy demanding process	
	Work practices - Time constraints	
	Work practices - Repeat prescribing without review	Antidepressant review as trigger
		Medication review in nursing homes as opportunity
Health Professionals' confidence in their ability to manage	Lack of confidence in skills and knowledge	Confidence in skills and knowledge
	Lack of information/guidance and evidence that support antidepressant discontinuation	Information/guidance and evidence that support antidepressant discontinuation
Perceived patient readiness to stop by the Health Professional	Patients' difficult personal life circumstances	
	(Assumed) patients' resistance to stop/pressure to continue	Motivated patient- patient request to stop
	Patients' psychological dependence	Patients' confidence in capability to stopping & having effective coping strategies
	Stability (personal, life and social circumstances)	Stability (personal, life and social circumstances)
Support from trusted people	Pressure to continue /resistance to discontinue	Collaboration with trusted people to support discontinuation
Support from other Health Professionals	Limited available and accessible alternatives to support antidepressant discontinuation	Collaboration with other Health Professionals to support discontinuation
	Questioning expertise of other Health Professionals	
	Resistance to discontinue/pressure to continue from other Health Professionals	

The review included many more barriers (n=31) than facilitators (n=18). Although there was a variation in the relative contribution of each study to each theme, barriers were generally present in nearly all studies.

1. Perception of AD

This theme refers to the **HPs' perception of long-term AD use** (the effectiveness and safety) and beliefs about the cause of depression and therefore the appropriateness of the AD, and this was described in 10 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Iden et al. 2011; Johnson et al. 2017; Kelly et al. 2021; Pollack and Grime 2002; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

A **perceived still positive effect** of the AD was a main barrier to discontinuing in 6 studies (Bowers et al. 2019; Johnson et al. 2017; Kelly et al. 2021; Pollack and Grime 2002; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *GP considered that ADs work well and help patients to remain stable, irrespective their action, placebo or otherwise, because patients feel well. As one GP commented … 'whether the effect is actually realistic or not is irrelevant, for 10 years you've experienced a positive feeling from it, that will not go away' (Van Leeuwen et al. 2021)*

Some HPs question the effectiveness of long-term ADs in older people, however they give them the **'benefit of the doubt',** and this acted as a barrier to discontinuation in older patients in 3 studies (Dickinson et al. 2010; Iden et al. 2011; Van Leeuwen et al. 2022b).

> *Although both doctors and nurses expressed great uncertainty about whether the medication was effective, they admitted that they commonly maintained patients on ADs: You may be unsure whether they need the treatment; but you know what you have, and you don't know what you'll get. (Iden et al. 2011)*

In contrast, one study identified AD as adding **no value in older people with cognitive impairment/dementia or severe health problems**, and these situations were described as facilitators to discontinuation (Van Leeuwen et al. 2022b).

> *In these patients, it was considered more important to minimise the number of drugs and the AD was thought not to add much value: 'you want to improve their quality of life and the less medication they need to take the better' (Van Leeuwen et al. 2022b)*

A main barrier to discontinuation within this theme was a perception of **'safe' medication and well tolerated in the general population** identified in 5 studies (Johnson et al. 2017; Kelly et al. 2021; Pollack and Grime 2002; Van Leeuwen et al. 2021; Vaswani Bye 2020). There was **also** a lack of concerns about adverse events **in older people** in 2 studies (Dickinson et al. 2010; Van Leeuwen et al. 2022b).

> *Neither patients nor GPs had concerns about side effects and this provides little apprehension in the initiation and maintenance of ADs (Dickinson et al. 2010)*

In contrast, **clear harm from ADs in terms of patients experiencing adverse events** appeared as a facilitator in 3 studies (Bosman et al. 2016; Van Leeuwen et al. 2021; Vaswani Bye 2020).

Regarding the appropriateness of the AD in relation to the cause of depression, there were 2 barriers to discontinuation. The first was a belief that ADs **correct a chemical imbalance** in the brain and are necessary for the patient to take in order to remain stable ,which was described in 3 studies (Bosman et al. 2016; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *'Well, there's something wrong with their serotonin … that can't be fixed. And taking the medication prevents depression and treats it.' (Vaswani Bye 2020)*

The second was the **belief that depression is a chronic disease requiring long-term treatment** which was described in 2 studies (Kelly et al. 2021; Vaswani Bye 2020).

On the other hand, the belief that the depression was **seasonal or caused by life circumstances with intermittent need** may facilitate discontinuation and this was mentioned in 2 studies (Bosman et al. 2016; Vaswani Bye 2020).

Some GPs noticed that their patient only experienced symptoms in winter and therefore saw no indication to continue ADs during other seasons. (Bosman et al. 2016)

2. Fears

Fears refers to the **negative or unknown consequences of discontinuation** and this theme was addressed in 11 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Huijbers et al. 2020; Iden et al. 2011; Johnson et al. 2017; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

The risk of destabilisation or relapse of a patient who was feeling well was a key barrier to discontinuation and described in 11 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Huijbers et al. 2020; Iden et al. 2011; Johnson et al. 2017; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020). Moreover, HP concerns about relapses were increased in case of previous failed discontinuation attempts or long depressive history.

> *'It's scary to stop a medication that's been going for a long time, because you kind of think am I opening a can of worms here?' (Dickinson et al. 2010)*

Moreover, the **fear of a winter/seasonal impact** on the risk of relapse acted as a barrier to discontinuation in 2 studies (Dickinson et al. 2010; Van Leeuwen et al. 2021).

> *Many GPs were not inclined to discuss the issue in autumn/winter or around Christmas time or other holidays. They assumed people would not feel well or be lonely, increasing the risk of destabilization. (Van Leeuwen et al. 2021)*

Other barriers related to fears were **the risk of suicide** in 2 studies (Donald et al. 2021; Vaswani Bye 2020)) and the **risk of (possible long-lasting) withdrawal symptoms** in 2 studies (Kelly et al. 2021; Vaswani Bye 2020). In contrast, **concerns about nocebo effects** caused by giving information about withdrawal symptoms were present in one study with psychiatrists (Huijbers et al. 2020).

> *Clinicians were particularly concerned about nocebo effects when discussing potential withdrawal effects, suggesting to provide some information but avoiding being very specific about it. (Huijbers et al. 2020)*

This theme only appeared as a facilitator in one study. **The risk of harm from continuing the AD** in combination **with a new health related issue** such as a new pregnancy, disease or medication was identified as a facilitator to discontinuation (Van Leeuwen et al. 2021).

3. HP Role and responsibility

HPs varied in their **perceived role and responsibility** to raise the issue and this was described in 9 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Iden et al. 2011; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

Key facilitators were a belief of **HPs own responsibility to initiate discussions** about discontinuation as prescriber of the AD and **involvement in the initial AD prescription** and thereby making **stopping agreements in advance** preparing patients for discontinuation in future in 6 studies (Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *So, when I do start someone on ADs I say "Well I don't believe this should be something you take forever ... I intend to review it every 3 months and then to come off after you've been stable for at least 6 months. (Donald et al. 2021)*

Furthermore, **continuity and knowing the patient and their situation**, **their depression, the triggers and reason for the AD and the progression** since the start of the AD facilitated discontinuation in 6 studies (Bowers et al. 2019; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

In contrast, **split care with a different doctor** at each consultation was mentioned as a barrier to discontinuation in 3 studies (Bowers et al. 2019; Donald et al. 2021; Kelly et al. 2021).

> *'In the busyness of our everyday work, they might leave in one prescription for 6 months and the next prescription for 6 months and no one is keeping an eye on their file. And if you are particularly in a multi-partner practice, you may fall in between lots of different stools. Like a collusion of institutional anonymity.' (Kelly et al. 2021)*

The key barrier was **devolvement of responsibility for discontinuation to others** (patients, trusted person or other prescribers) or **beyond clinical practice** (the pharmaceutical industry, social and policy environment). By ascribing the responsibility to 'others', HPs reduce their own responsibility in the discontinuation process.

A HP's belief that it is the **patient's responsibility** to pro-actively ask to stop the AD act as a barrier to discontinuation was identified in 4 studies (Bosman et al. 2016; Bowers et al. 2019; Kelly et al. 2021; Van Leeuwen et al. 2021). In a study within the nursing home context, a belief that it is the trusted person's responsibility was also a barrier (Van Leeuwen et al. 2022b).

> *… some GPs stated that when a patient is stable on medication there is no need for follow-up. They expect patients to contact them when their situation changes or when the patient wants to change or discontinue their treatment. (Bosman et al. 2016)*

However, this lack of pro-active attitude may lead to continuation of the AD as patients are not inclined to raise the issue. As described by a psychotherapist (Bowers et al. 2019):

> *I've met a lot of people who are really hesitant about asking about changes in medication, because of the response from the doctor perhaps or their perceived response…I think there's often a worry, you know, the kind of, 'Doctor knows best, and they put me on this medication.'* (Bowers et al. 2019)

Moreover, a HP **assumption that the patients wants to continue** when patients do not raise the issue of discontinuation was described as a reason to continue in 3 studies (Bowers et al. 2019; Kelly et al. 2021; Van Leeuwen et al. 2021).

> *As a result, patients and GPs are each waiting for the other to raise the issue of discontinuation, and meanwhile, the status quo is maintained.* (Van Leeuwen et al. 2021)

Another example within this theme was the devolvement to other prescribers such as **the initial prescriber** for patients on long-term ADs "**inherited"** from the previous doctor or to their practice **colleague** in 4 studies (Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020). With this, they put the locus of control with other clinicians.

> *'Well, no, a lack of trust is not the right way to put it, but the other doctor told them to take that medication. At that moment they have a consultation for something else that they trust you with but changing that other tablet will need to be tackled by the one who initiated the treatment'.* (Van Leeuwen et al. 2021)

Similar, situations where ADs were **initially prescribed by the psychiatrist with patients no longer or still under care,** were found as barriers to discontinuation in 3 studies, either because of the (assumed) more severe degree of the condition or out of respect for a perceived 'medical hierarchy' (Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *They are particularly concerned about stopping it because they'll say well the psychiatrist started the tablet, why are you stopping it? (Kelly et al. 2021)*

Devolvement of responsibility beyond the level of clinical practice was also reported as a barrier to discontinuing AD. The **broader social and policy environment** (e.g how AD and mental health problems are viewed in multiple societies and countries) was mentioned as a reason for continuing AD in 4 studies (Dickinson et al. 2010; Donald et al. 2021; Johnson et al. 2017; Vaswani Bye 2020). An explanation for this may be the societal expectation that problems can and should be solved by medication rather than by changing lifestyle or by psychosocial intervention.

'It's probably nothing to do with doctors, it's actually changing the conversation in our society about what causes anxiety and why… the management of anxiety baseline is not a medication, it's not a drug, but it's about finding ways to manage it by changing your lifestyle.' (Donald et al. 2021)

The influence of the **pharmaceutical industry** and thereby promoting the biological model of depression and AD use including long-term use rather than discontinuation was found as a barrier in 3 studies (Donald et al. 2021; Johnson et al. 2017; Vaswani Bye 2020)

Some participants noted that that the pharmaceutical companies have promoted the discourse of depression being a chronic rather than an acute condition. They argued that this has allowed for long-term maintenance treatment to be viewed as acceptable despite the lack of long-term effectiveness studies. (Vaswani Bye 2020)

4. HPs' perceptions of AD discontinuation ('HPs' intrinsic motivations')

This theme refers to HPs' **perceptions (intrinsic motivation, negative/positive)** towards AD discontinuation and this was present in 10 studies (Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Iden et al. 2011; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020)

A belief that discontinuation is a low priority with no perceived benefits compared to continuation appeared to be a barrier in 2 studies (Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021)

> *None of the GPs framed discontinuation ADs positively or emphasised that it is a positive message that carries benefits for the patient (e.g. final recovery from depression, enhanced self-confidence of the patient)* (Van Leeuwen et al. 2021)

Another barrier was the **futility of discontinuation ADs in older people** in 4 studies (Dickinson et al. 2010; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2022b).

> *There are some bigger battles I think out there, than persuading them to stop their AD. (Dickinson et al. 2010)*

A negative perception of discontinuation was also expressed in terms of the description of deprescribing as **difficult and an energy and time-consuming process** in 7 studies (Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *You know it's not going to be necessarily a straightforward consultation and it might be time consuming, it might delay you and .. you can see how that, as a clinician, restrains you from perhaps rocking the boat. (Bowers et al. 2019)*

In one study, the time-consuming process was therefore expressed as a ***'journey'*** taken together with ongoing discussion over time to review progress and prepare patients (Donald et al. 2021).

> *discontinuation was expressed by GPs as a journey or 'process of discontinuation' highlighting the steps or 'practicalities' of discontinuation including planting the seed, a tailored plan of action with gradual dose reduction and proactive relapse planning, and ensuring care continues during and after discontinuation. (Donald et al. 2021)*

Consequently, **work issues as time constraints** (especially in winter during busy consultations) in 9 studies. (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Iden et al. 2011; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020) and work practices in the form of **repeat prescribing without an AD review** in 10 studies were key barriers to discontinuation (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Iden et al. 2011; Johnson et al. 2017; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *Routine prescribing after the acute depressive episode was very common. 'it has become a routine and a convenience. It is really a convenience for both parties'.* (Van Leeuwen et al. 2021)

In contrast, **an AD review** may act as a trigger to discontinuation in 6 studies (Bosman et al. 2016; Dickinson et al. 2010; Donald et al. 2021; Johnson et al. 2017; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021).However, an AD review does not always result in discontinuation as described in one study:

> *'We evaluate at least once a year, standard for patients taking ADs or … there is also other medication which we also evaluate every year. Normally these are short appointments, but at least we keep track of the patients. Not willing to discontinue yet? Fine, but at least we know.' Bosman (Bosman et al. 2016)*

In the context of a nursing home, **a medication review** was perceived as an opportunity to reconsider the AD and facilitator to discontinuation in 2 studies, certainly in newly arrived residents or in residents with a change in GP (Iden et al. 2011; Van Leeuwen et al. 2022b); nevertheless the AD was not always perceived as a priority to stop.

'I think that the more medication they take, the more difficult it is to stop the AD. … that is the last thing.' (Van Leeuwen et al. 2022b)

Another facilitator was a belief that **discontinuation brings benefits for the patient** in 3 studies (Bosman et al. 2016; Donald et al. 2021; Vaswani Bye 2020)) in terms of removal of adverse events especially patients' reliance on ADs with a positive impact on their identity and personal agency.

Many GPs' emphasised the empowering effect of being released from medication reliance. 'The patient gains new life, they feel like, "I don't need it! I've regained my life. I don't need to be dependent on anything." (Donald et al. 2021)

Moreover, in one study with psychiatrists, the belief that guiding and supporting a patient during the discontinuation process is a **rewarding task for the HP** appeared to be a facilitator to discontinuation (Vaswani Bye 2020).

Another participant [psychiatrist] said that she felt like discontinuation was very "real" and would lead to a lowering of the rate of physician burnout because it required a truly collaborative and non-hierarchical relationship (Vaswani Bye 2020).

5. HPs' confidence in their ability to manage discontinuation

This theme refers to the extent to which HPs have **confidence to manage the discontinuation process.** It encompasses **skills and knowledge** and information that support discontinuation **(guidance and evidence).** This theme was described in 7 studies (Bosman et al. 2016; Bowers et al. 2019; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

Barriers were: **HPs lack of knowledge** (e.g. potential harms from long-term use of ADs and withdrawal symptoms and the difference with relapse), **communication skills** (e.g. skills to overcome patient's resistance or to raise the issue after many years of AD use) , **and the lack of information/guidance and evidence that support discontinuation of AD**s (e.g. guidance on managing long-term ADs after many years of use and on deprescribing including tapering schemes for the different ADs) in 7 studies (Bosman et al. 2016; Bowers et al. 2019; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

So, you feel like you really are doing this alone and there's not really clear guidelines about when you should stop medication; it's all a little bit subjective (Donald et al. 2021)

Facilitators were: **HPs' confidence in their skills and knowledge** to guide a patient during the discontinuation process in 4 studies (Bosman et al. 2016; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020)., **better guidance/information and evidence that support discontinuation** in 6 studies (Bosman et al. 2016; Bowers et al. 2019; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020). such as a practical step-by-step guide to discontinue long-term use, patient information leaflets and alerts to AD review and audit tools in prescribing software.

> *If I could print a leaflet and give it to the patient with some extra information, that would really help me. Right now you take away their AD and send them on their way with nothing. Being able to give them something to take home would help.* (Van Leeuwen et al. 2021)

6. Perceived patient readiness to stop by the HP

Discontinuation was influenced by how HP perceive **patients' expectations and patients ability** to **cope without the AD** and this was mentioned in 12 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Huijbers et al. 2020; Iden et al. 2011; Johnson et al. 2017; Kelly et al. 2021; Pollack and Grime 2002; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020). It encompasses HP beliefs about the patient's motivation and capabilities to stop the AD, their coping strategies to manage life issues and perceived dependence on ADs, and the stability of their life circumstances.

There were 3 main barriers.

The first barrier was **difficult personal and life circumstances** which was described in 9 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Huijbers et al. 2020; Johnson et al. 2017; Pollack and Grime 2002; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021). In these situations, a **strong desire to help patients** in difficult/unstable life circumstances and **feeling empathy** were found as important reasons to continue the AD.

> *GPs also acknowledged the intractability of some patient's situations: 'I think they have horrible lives, a lot of them ... I think it's a combination of all things, their health, their social circumstances ... I think a lot of people are on ADs because of everything put together. And you can't ... change most of the factors that cause it.' (Dickinson et al. 2010)*

The second was **resistance to discontinuation/pressure to continue** from the patients which was described in 9 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Johnson et al. 2017; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *If someone really doesn't want to come off, certainly I think that it's something you revisit when you see them but you're not going to force somebody off a medication if they feel that it is doing them some good and they want to stay on it. (Kelly et al. 2021)*

The third was **a patients' psychological dependence** which was described in 6 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Johnson et al. 2017; Vaswani Bye 2020).

> *Patients obviously received ADs when they were experiencing a miserable time. Whether or not it is related to the AD, they feel better again and link feeling better to having received ADs. Patients can sometimes feel very dependent of those tablets for their happiness. (Bosman et al. 2016)*

Stability in terms of stable personal, life and social circumstances was both a barrier and a facilitator to discontinuation.

Stability perceived as a positive effect from the AD can mean that **AD has a role in improved functioning and achieving stability in life circumstances** and patient should continue the AD, thereby serving as a barrier to discontinue in 4 studies (Bosman et al. 2016; Bowers et al. 2019; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021), which is strongly associated with the subthemes ADs are effective and the risk of relapse after discontinuation.

> *I am so glad that this patient is doing so much better, so we are both less inclined to discontinue. (Bosman et al. 2016)*

Stability can also mean that patients are able to come off the AD because **stable personal and life circumstances are required for discontinuation** and this was found as a facilitator in 5 studies (Bosman et al. 2016; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020). Having a stable relationship, employment, low financial stress were specifically mentioned.

> *And so it's normally at a stage when they're quite stable mentally and they feel pretty good in themselves, they haven't really needed any other psychological interventions, and that's usually when I find they're more responsive to coming off therapy when there's no other crises going on in their life. Donald (Donald et al. 2021)*

In one study a stable patient was not considered as a strong reason for discontinuation in its own right, and GPs considered only **a new positive life event as an alternative to the AD** and a strong facilitator to discontinuation (*Van Leeuwen 2021).*

> *Our GPs described they wait for 'the optimal moment'. They explained that they only attempt discontinuation if an 'alternative' to the AD is available. For instance, a new positive life event or lifestyle such as a new hobby, new (voluntary) work, new grandchild, a new relationship.* (Van Leeuwen et al. 2021)

Another facilitator to discontinuation was **a motivated patient** in 5 studies (Bosman et al. 2016; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020). Moreover, in 4 studies, **a request to stop from the patient** was seen as a marker for readiness and the right condition to discontinue (Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *they've got to be ready to want to stop, even if you tell them about the side effects and that they don't need to be on it as many times as you want but if they're not ready then in my experience it won't go very well. (Donald et al. 2021)*

Other perceived patient-related facilitators by the HP were: **patients' confidence in ability to stop** and **having effective coping strategies to manage life issues** in 5 studies (Bosman et al. 2016; Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020).

7. Support from trusted people

This theme refers to collaboration between the HP and patient's trusted people (e.g. family or close friends) in relation to the discontinuation process and the role that they play. This theme was addressed in 4 studies (Bosman et al. 2016; Donald et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020).

Trusted people were both a barrier and facilitator to discontinuation.

They could facilitate discontinuation by **collaboration with the HP and providing supportive guidance to the patient**, which was described in 4 studies (Bosman et al. 2016; Donald et al. 2021; Van Leeuwen et al. 2022b; Vaswani Bye 2020). This included spending more time together with the patient or monitoring patient's symptoms during discontinuation:

> *Involving patient networks also served as a safety net to manage risk of liability by involving them in monitoring symptoms of withdrawal or relapse. (Vaswani Bye 2020)*

In contrast, trusted people were also identified as a **barrier** through **pressure to continue/resistance to discontinue** in 2 studies (Van Leeuwen et al. 2021; Vaswani Bye 2020). However, both studies

reported that it is worth the time to discuss discontinuation with them, believing significant others can be persuaded to reconsider the AD and try discontinuation.

> *You need to get them [patient's network] on board' … It has already happened that I start tapering the AD and the family calls me the same evening; why did you stop that?' Van Leeuwen 2022 (Van Leeuwen et al. 2022b)*

8. Support from other HPs

This theme relates to the role of other HPs play in supporting the discontinuation process and this was described in 10 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Huijbers et al. 2020; Iden et al. 2011; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020).

The main facilitator was **collaboration with other HPs to support the discontinuation process** in 10 studies (Bosman et al. 2016; Bowers et al. 2019; Dickinson et al. 2010; Donald et al. 2021; Huijbers et al. 2020; Iden et al. 2011; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021; Vaswani Bye 2020) and this could facilitate discontinuation in two ways, by **providing support for the patient or by support for the HP.** Several specific HPs were mentioned including mental health assistants, psychologists, nurse practitioners, social workers, pharmacists, care coordinators and psychiatrists.

Support for the patient included **psychological approaches** provided by the therapist during discontinuation and thereby improving patient's self-efficacy and managing patients' fears (Donald et al. 2021; Kelly et al. 2021; Van Leeuwen et al. 2021; Vaswani Bye 2020).

> *All participants [GP] identified the importance of evidence-based adjunct psychological interventions to support the deprescribing process such as cognitive therapy, counselling and talk therapy. 'It would be great to use those psychological supports for that (deprescribing SSRIs). (Kelly et al. 2021)*

Support in nursing homes involved more talking between the nursing staff and the resident during the day or patient involvement in social activities organised by the occupational therapist (Iden et al. 2011; Van Leeuwen et al. 2022b).

Collaboration could also mean support for the HP **by having more teamwork** through the discontinuation process and **sharing the responsibility of the management of discontinuation**. This

included advice on patient readiness from psychotherapists to the prescriber or a close follow-up during discontinuation by the nursing staff in nursing homes.

> *If psychologists would say: 'I do not see any alarming signs anymore, they told me the following things had happened and they responded in this way, so I notice that there is an improved coping mechanism right now'. If you would get that kind of feedback you would feel more confident that it will work.* (Van Leeuwen et al. 2021)

Having access to advice from psychiatry for patients with complex presentations and thereby serving **as safety net** for the HP was described in one study:

> *I think it's really important that we have the safety component of secondary care backup if needed. That you can speak with somebody in psychiatric care for advice if needed; that you can refer someone quickly if needed. (Kelly et al. 2021)*

However, **insufficient availability and access to other HPs was a main barrier to discontinuation** in 6 studies (Dickinson et al. 2010; Donald et al. 2021; Iden et al. 2011; Kelly et al. 2021; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021). For example, in the case of lack of accessible psychological approaches to support discontinuation:

> *There are no cognitive services freely available. People can pay for them. I'm not going to get priority if I say I want to stop a SSRI and I want you to provide cognitive support. (Kelly et al. 2021)*

Moreover, **uncertainty about sufficient expertise of other HP to support the AD discontinuation process** was reported in 3 studies (Bowers et al. 2019; Iden et al. 2011; Van Leeuwen et al. 2021). Specifically, GPs doubted about the expertise of the psychotherapists (Van Leeuwen et al. 2021), nurse practitioners in general practice (Bowers et al. 2019) and also about nursing staff in nursing homes (Iden et al. 2011).

> *Although nurses have been considered to play a role in these discussions, there is acknowledgement that there are limitations regarding their authority and experience in managing medications, and often patients are signposted to their GP by their nurse. (Bowers et al. 2019)*

Specifically for the nursing home context, **resistance to discontinue/pressure to continue** from nursing staff acted as a barrier to discontinuation (Iden et al. 2011).

They [Nursing staff] called me on the carpet to tell me that withdrawing ADs was not a clever thing to do because the patient became angrier and resisted care. They therefore demanded that I reinstate medication. (Iden et al. 2011)

4. Discussion

4.1 Summary

We added 7 new relevant studies reporting HP perspectives to the 2019 qualitative evidence synthesis by Maund et al. We performed a thematic synthesis of 13 studies of HP perspectives that included eight themes and 49 subthemes. The themes are ordered chronologically according to the considerations that HPs may make at each step when they review a person's long-term AD treatment: perceptions of ADs, fears, HP role and responsibility, HPs' perceptions of AD discontinuation, HPs' confidence in their ability to manage discontinuation, perceived patient readiness to stop, and support from trusted people and from other HP.

Our review found convincing evidence that the barriers far outweigh the facilitators, reflecting HPs pessimistic views on AD discontinuation success. Our findings indicate that discontinuation is a complex task for HPs with fear of relapse as common barrier to discontinuation. This fear may be driven by their belief in the long-term effectiveness and safety of the AD, and a perception that they are necessary to correct a chemical imbalance. The perception that discontinuation is a difficult and consumes time and energy, reinforce HPs' negative view on discontinuation of ADs, leading them to continue the AD use without reviewing. Other barriers include devolving responsibility to raise the issue of discontinuation to the patient, other prescribers or beyond clinical practice, lack of confidence regarding their ability to manage discontinuation and insufficient guidance and evidence to support discontinuation. Finally, patient's trusted people and other HPs can both hinder by refusing discontinuation or facilitate discontinuation through collaboration and support.

Key facilitators include a HPs' belief in their own responsibility to initiate discussions about discontinuation, their involvement in the initial prescription, knowing the patient and a motivated patient or a patient request.

4.2 Strengths and Limitations

The study is an update of a qualitative evidence synthesis published in 2019, which explored HP and patient perspectives on discontinuing long-term ADs. However, due to insufficient data, thematic synthesis was not performed for the HP perspective. As a result of the growing interest in this topic, our update review included 7 new qualitative studies with HPs from 2019 to 2022, which exceeds the suggestion minimum of 12 studies for a robust analysis (Booth 2016)).

This is the first systematic review and qualitative synthesis specifically focusing on HP barriers and facilitators to discontinuing ADs, with study samples predominantly consisting of GPs compared to other HPs. This may align with the fact that most ADs are prescribed by GPs (AIHW 2022; RIZIV-INAMI 2023). Our review identified that from the HP perspective, other HPs can be barrier or facilitator, making the perspectives of other HPs such as pharmacists and mental health workers relevant. Moreover, the 2019 review found that other HPs in addition or instead of the GP, were perceived as sources of support for the patient (Maund et al. 2019). However, as our results may not be transferable to other HPs than the GP, further research into other HP perspectives is needed.

We incorporated direct quotations from included studies to ground our interpretations in the original studies (Finfgeld-Connett 2010) and considered 'dissonant' cases within our themes (Carroll and Booth 2015). Using this approach, we gained deeper insights into barriers and facilitators to discontinuing ADs than reading any of the included studies in isolation. This process of synthesising qualitative studies involves inherently interpretation, especially relevant as new authors joined the team in the update. However, this diversity, with authors from different countries and various backgrounds (GP, psychologist, sociologist, clinical pharmacologist, methodologist) may enhance the validity of our findings. It is important to acknowledge that the primary analyst's (EVL) personal perspective as GP may have influenced the analysis and the ordering of the themes (Braun and Clarke 2023).

One limitation to note was that some of the authors of this updated review were involved in three of the newer studies (Bowers et al. 2019; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021) and so their interpretation was not independent of those studies. Instead of two researchers independently performing line by line coding and generating analytical themes, coding and development of subthemes and themes was performed by one researcher (EVL) and further developed through discussion between the other researchers. However, this method has been used in other published qualitative evidence syntheses.

Because most studies focused on HP views on discontinuation in adults within the community setting, our results may not be transferrable to settings with older people in nursing homes. Further research into the nursing home context is required, certainly given nursing staff and trusted people have a specific role in nursing homes (Van Leeuwen et al. 2022b). Furthermore, our protocol indicated that we would conduct subgroup analysis based on the duration of AD use. However, this was not feasible since the primary studies did not differentiate AD use based on the length of long-term use.

4.3 Comparison to other literature

Two other relevant studies, although with different methodologies and aims, found an extensive overlap with this study. The narrative review of Scholten (Scholten et al. 2020) included only 2 of our

13 included studies (Bosman et al. 2016; Bowers et al. 2019) but identified 4 main barriers (fear of relapse or recurrence, insufficient evaluation and monitoring, withdrawal symptoms, and actual relapse or recurrence) that were also found in our study (Scholten et al. 2020). The concept-mapping study of Wentink (Wentink et al. 2019) et al identified six clusters of topics as important to discuss: 'Process of discontinuation', 'Expectations', 'Professional guidance', 'Current use', 'Environment', and 'Side effects'. They also found that patients rated 'professional guidance' as more important than the HPs. This aligns with the finding from the 2019 review of patient beliefs that the doctor is responsible for initiating discussions about discontinuation (Maund et al. 2019). However, our review indicates that not all HPs are inclined to start this discussion. Moreover, HP perceive a patient request for stopping or a patient starting the discussion on discontinuation as a sign for readiness and the right moment for the patient to stop the AD. As a result, patients and HPs wait for the other party to raise discontinuation, and in the meantime, the 'status quo' is maintained. If no one raises the issue, no review of whether the AD is still required will occur, increasing the likelihood of unnecessarily continuing the AD. Indeed, studies analysing the frequency of AD reviews found that the longer patients take AD, the less likely it will be reviewed by the HP (Middleton and Moncrieff 2011; Sinclair et al. 2014). Furthermore, a patient survey suggests that 65% of AD users never had discussed with the prescriber to come off AD discontinuation, and 48% reported [i]no frequent review (Read et al. 2019).

A qualitative review of HP barriers and enablers to deprescribing any long-term medication (Anderson et al. 2014) included 21 studies, of whom 2 were included in our study (Dickinson et al. 2010; Iden et al. 2011). Our themes are in agreement with the Anderson et al. main themes of awareness, inertia, self-efficacy and feasibility. However, unlike our study, their review did not identify the impact of a seasonal effect which is related to fear of relapse. Similar subthemes to our own were also found in a qualitative evidence synthesis of barriers and facilitators to deprescribing in primary care, including the organization of the health care system with gaps in care (split care), the socio-cultural system with the attitude of 'more is better' and 'pill for every ill' (Doherty et al. 2020). In contrast to our review, they did not mention the role of the pharmaceutical industry.

4.4 Implications for practice and research

The purpose of this review was to identify factors influencing HPs decisions to continue or discontinue long-term AD treatment.

One key barrier we identified was HPs' fear of negatives outcomes for the patients, which was also found in the review of patient perspectives (Maund et al. 2019). HPs' fear of patient relapse may be explained by their belief that the AD is still effective. On the contrary, there is a lack of evidence

supporting their effectiveness over years, which raises doubts about long-term use, especially in people with a history of one of two prior episode who are at a lower risk of relapse, and are the majority of the group of people taking AD in primary care. Moreover, in contrast to HP beliefs, adverse events of ADs are common, and the risk persists over time and increases with age (Bet et al. 2013). Thus, the long-term AD use without clear indication should be recognised as a significant health problem.

HP education should take into account the findings of our study. HPs should have a realistic view of the risks of discontinuation, and be reassured that although the risk of relapse after discontinuation is present, it may be lower than they perceive (Lewis et al. 2021; Mangin et al. 2016). Our findings also emphasize the importance of focusing on the longer-term benefits of discontinuation. Providing more resources, guidance and information about discontinuation may increase HPs' confidence in their ability to manage discontinuation as well as their ability to support patients through discontinuation. This, in turn, may help to reassure HPs and reduce their fears of relapse, and increase their self-efficacy.

Overall, given the numerous HP barriers illustrating the difficulties associated with the AD discontinuation process and the negative view on AD discontinuation success, investment and support for HPs (and patients) are required to have any impact on reducing long-term AD use.

Collaboration among HPs may facilitate discontinuation AD by sharing responsibility in discontinuation management, and which can act as reassurance and confidence-building, which was also found in other reviews of deprescribing (Anderson et al. 2014; Doherty et al. 2020). Moreover, patients also identified other HPs besides physicians, such as mental health workers as potential sources of support (Maund et al. 2019). However, it is important to keep in mind that other HPs may also act as barrier by refusing discontinuation or pressure to continue. Moreover, dealing with the risks of discontinuation such as relapse is already a challenging issue for GPs, which may even be more difficult for other HPs such as pharmacists and nurse and mental health practitioners (Payne 2020). Therefore, further research should explore other HPs perspectives. A specific finding of our review is that patient's trusted people can be both a barrier and a facilitator for HPs, which was also reported for patients (Maund et al. 2019; Van Leeuwen et al. 2022a). More research into trusted people's perspectives would help build a more comprehensive understanding of their role.

Conclusions

Deprescribing long-term AD is a challenging concept for HPs. The review found evidence that the barriers far outweigh the facilitators, and a main HP barrier was fear of relapse. These findings can be used to inform future interventions. HPs' education, reassurance and confidence-building are key to improving the initiation of AD discontinuation discussion. Investments and support for HPs and

patients will be necessary. Further research from an HP perspective, other than GPs, such as pharmacist and mental health workers is needed as well as exploring the role of trusted people.

Ethics approval

Ethics approval was not required for this study

Authorship Statement

EVL, TC, EM and TK conceived and designed the study. The searches were carried out by EM, and the selection of the studies by EVL. EM reviewed 50% of the titles and abstracts as a check, both selected studies from full text-papers. Data extraction and assessment of study quality was carried out by EVL and checked by EM. EVL conducted the study analysis and interpretation of data, and all authors helped analysis. EVL drafted and revised the manuscript, and all authors critically reviewed the manuscript and approved the submitted version.

Previous presentations

The review was presented by EVL in March 2023 at the SAPCS South West Regional Meeting in Birmingham (UK) and the BJGP research day in London (UK). They were also presented by TK at the Society for Academic Primary Care Annual Scientific Meeting, Brighton (UK), July 2023.

Interests Statement

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: no support from any organisation for the submitted work, with the exception of Professor Tony Kendrick, who received a salary from the University of Southampton; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years, with the exception of Professor Kendrick, who received 2 grants for depression research from the National Institute for Health research, personal fees for lectures and a BMJ Learning online module on Depression, and Dr Hannah Bowers, who reports personal fees from National institute for Health Research paid by University of Southampton, and personal fees and stock options from Outro Health Group. No other relationships or activities that could appear to have influenced the submitted work with the exception of Professor Kendrick who was a member of the NICE Depression Guideline

Committee. As mentioned in the 'Strengths and Limitations', four authors of this updated review (EVL, TK, HB, TC) were involved in three of the newer studies (Bowers et al. 2019; Van Leeuwen et al. 2022b; Van Leeuwen et al. 2021).

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