Spiritual belief, social support, physical functioning and depression among older people in rural areas in Bulgaria and Romania

<table>
<thead>
<tr>
<th>Journal:</th>
<th>Aging and Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manuscript ID:</td>
<td>CAMH-2010-0030</td>
</tr>
<tr>
<td>Manuscript Type:</td>
<td>Original Article</td>
</tr>
<tr>
<td>Keywords:</td>
<td>religion, Eastern Europe, social change, Coping &lt; Caregiving, mental health services</td>
</tr>
</tbody>
</table>
Spiritual belief, social support, physical functioning and depression among older people in rural areas in Bulgaria and Romania

Abstract

Objectives:
An exploratory investigation is reported into the role of spirituality and religious practice in protecting against depression among older people living in rural villages in Bulgaria and Romania, two neighbouring countries with similar cultural, political and religious histories, but with differing levels of current religiosity.

Methods:
In both countries interviews were conducted with samples of 160 persons of 60 years and over in villages of similar socio-economic status. The HAD-D scale and the Royal Free Interview for Religious and Spiritual Beliefs were used to assess depression and spiritual belief and practice respectively. In addition social support, physical functioning and the presence of chronic diseases were assessed. One year later follow-up interviews were conducted with 58 of the original sample in Bulgaria, in which additional measures of depression and of spiritual belief and practice were also included.

Results:
The study demonstrates, as expected, significantly lower levels of spiritual belief in the Bulgarian sample, as well as significantly higher levels of depression, the latter attributable in large part to higher morbidity and disability rates, but less evidently to differences in strength of belief. However analyses from both the cross-sectional study and the one year follow-up of the Bulgarian sample do suggest that spiritual belief and practice both influence and reflect physical and mental illness.

Conclusions:
Religious and spiritual belief and practice constitute important means of coping with both physical and mental health problems in later life. Further investigation of their protective role is encouraged in populations of diverse religiosity.

Keywords: religion; Eastern Europe; social change; coping; mental health services
Spiritual belief, social support, physical functioning and depression among older people in rural areas in Bulgaria and Romania

Introduction

*Depression, ageing and religion/spirituality*

Depression is a common mental health problem amongst older persons and with the projected rise in the older population combating depression has become a major priority for health policy. Major depressive disorder, characterised by the presence of a number of vegetative as well as psychiatric symptoms, is not frequent, but ratings of minor depression, characterised principally by symptoms of dysphoria or anhedonia, are high, reaching levels of 15-25% in some epidemiologic studies of adults aged 65 and over (Fiske & Jones, 2005).

Risk factors for depression are similar at all ages but many become much more common in older people: bereavement and other major life changes, resultant social isolation and loss of roles, and especially physical illness and chronic disability. Indeed the fact that depression levels are not higher than they are among the older age groups suggests some degree of resilience that increases with age. Understanding better the factors that help many older people to cope with the stresses and losses of later life could provide clues on ways to help better those who succumb (Brandstaedter, 2006).

One set of resources that have been relatively little investigated are religious and spiritual practice and belief (Coleman, 2010). In correlation studies conducted in the US these appear as minor although statistically significant associates (Smith, McCullough, & Poll, 2003). However their true significance may be much greater because persons may turn to greater use of religious coping in times of difficulties.
For example, in contrast to church attendance which is associated positively with physical health, frequency of prayer activity is related negatively, suggesting its use as a coping resource (Nicholson, Rose, & Bobak, 2009).

Until recently the study of the relationship of religion and spirituality to mental health has been almost exclusively the preserve of North American researchers (Miller & Kelley, 2005) and reflect the high levels of religiosity evident in the US and elsewhere. However the recent development of measures of spirituality for use in a health context (Fetzer Institute, 1999; King, Speck, & Thomas, 2001; King et al., 2005) now provide alternative approaches. They have some advantages over previous measures in that they emphasise assessment of general spiritual belief, thus reflecting the much lower levels of religious belief evident in European countries rather than the specific religious features of, for example, American evangelical protestant Christianity.

The situation of older people in Bulgaria and Romania

Eastern Europe provides major opportunities for research on depression in later life. There is evidence of high rates of depression in these countries linked to disadvantaged physical and social circumstances (Nicholson et al, 2008; Paykel, Brugha, & Fryers, 2005). The older population in particular has suffered significant decline in living standards, particularly pension values, following the collapse of communist government in the former Soviet block countries from 1989 onwards. They have also been affected negatively, especially in rural areas, by the out-migration of younger people. Studies have highlighted the challenges posed to older people’s mental health and sense of well-being by the social upheaval in Eastern Europe in the last decade of the 20th century (Petrov, 1996a; 1996b).
Bulgaria and Romania are two neighbouring countries in South East Europe of similar levels of socio-economic development who have recently (2007) joined the European Union. They share many important cultural, religious and historical characteristics. Both, for example, were subject to Ottoman rule for many centuries but succeeded in preserving their Christian, principally Eastern Orthodox, heritage. However there are also striking religious differences between them. Whereas Romania has remained one of the most religious societies in Europe, which is evident also from the recent Eurobarometer report on values across the European Union (Eurobarometer, 2005), religious belief in Bulgaria has declined to a level more comparable to rates observable in Western Europe. This difference can be attributed in large part to recent historical factors. The Romanian Orthodox Church succeeded in maintaining a prominent role in society despite the persecution inflicted by communist governments (Gavril, Szilagyig, & Roudometof, 2005). It maintained a level of autonomy and was a trusted institution to fill the post communist era. By contrast, the Bulgarian Orthodox church found itself in a period of stagnation during communism, suffering considerable repression (Kanev, 2002). Since the fall of communism it has not yet been able to recover its previous position in society, although Orthodoxy remains a potent part of national culture and tradition.

It was hypothesised that in both societies religious belief and practice would have an overall positive association on mental health, but that this effect would be more apparent in Romania than in Bulgaria as a result of stronger religious norms of behaviour. Evidence in favour of this hypothesis has also been found in a recent study in Western Europe (Braam et al, 2001). Religion may be a more important resource, also at the individual level, in countries with a stronger culture of belief. It was also hypothesised that religious forms of coping would be more evident in circumstances
of physical and social stresses and would also be more beneficial in those circumstances (Kirby, Coleman, & Daley, 2004). Therefore it was necessary to include as part of the data collection measures of some of the main factors known to be associated with depression in later life such as diminished physical functioning and ill health, negative life events, and lack of social support (Braam et al, 2005; Kraaij, Arensman, & Spinhoven, 2002; Prince, Harwood, Blizard, Thomas, & Mann, 1997a; Prince, Harwood, Blizard, Thomas, & Mann, 1997b).

For this preliminary study it was decided to focus on rural rather than urban areas. Studies of rural areas are often neglected despite risk factors for depression being high there as well (Heilig, 2002). Moreover in Eastern Europe large proportions of older people live ruraly in isolation since younger adults tend to seek education or employment in cities. The infrastructure of rural mental health services may also be smaller with poorer accessibility (Yuen, Gerdes, & Gonzales, 1996). A recent United Nations report on population ageing highlights the large differences in much of Eastern Europe between the proportion of older persons in rural and urban areas, with Bulgaria identified as one of only ten countries in the world in which people aged 60 or over constituted more than 25% of the total rural population (United Nations, 2010).
Methods

Participants

Rural areas were selected for study in both countries. Samples of 160 participants over the age of 60 years were collected from two villages in Bulgaria and one village in Romania, of similar apparent levels of affluence and of between 3,500-4,000 inhabitants each. Interviews were conducted first in a Romanian village lying 30 km from the city of Braşov. Subsequently interviews were conducted in a village situated 11 km from the city of Sofia. To match the Romanian numbers further interviews were conducted in an additional village situated 9 km from Sofia.

Measures

The questionnaire consisted of sections taken and/or adapted from existing validated measures. Translation and back translation were used to ensure the language equivalence of the original and the target languages.

The primary outcome measure was assessed by means of the seven item Depression subscale of the Hospital Anxiety and Depression Scale (HAD-D). It is an easily understood self-administered scale that focuses on anhedonia (Flint & Rifat, 1995). Scores of 11-21 are generally considered to indicate probable depression, 8-10 possible depression, and 0-7 depression unlikely (Zigmond & Snaith, 1983).

The Royal Free Interview for Religious and Spiritual Beliefs (King et al, 2001) examines the strength and the consequences of spiritual faith. It was designed for use across a diversity of faiths. Strength of spiritual belief is calculated from five
questions each scored on a 0 to 10 Likert scale, indicating the person’s confidence in belief in a transcendent power which relates to the individual, the society and the world. The questionnaire includes additional questions on prayer and attendance at communal religious worship. Prayer frequency was assessed on a six point scale; attendance at worship on a five point scale.

Physical Limitation was assessed from the 10 item subscale of the MOS SF36 (Ware & Sherbourne, 1992). Additional questions were asked on the presence of any long term illness or disability, as well as on age, gender, marital status, level of education, employment, perceived financial status, and housing situation.

The Medical Outcomes Study Social Support Survey (MOS SSS) (Sherbourne & Stewart, 1991) is a 19 item, structured, self-report questionnaire that the patient can generally complete with little or no intervention from an interviewer. It has the advantage of measuring four subscales: emotional/informational support, tangible support, affectionate support and positive social interaction. It also generates an overall functional social support value from 0 to 100.

‘Threatening Life Events’ encountered over the previous year were assessed using a revised version of the scale devised by Brugha et al. (1985).

In addition each participant was asked to identify each ‘major long-term illness from which they suffered. The most frequently reported were joint diseases, hypertension, ischaemic heart disease, and diabetes.

Procedure

Ethical approval was obtained from the University of Southampton to conduct questionnaire based face to face interviews with participants in both Bulgaria and
Romania. Participants over the age of 60 years were recruited by means principally of
door to door knocking in the villages concerned by Southampton medical students in
the company of Bulgarian/Romanian interpreters during the late summer and autumn
of 2007. The interviews were also monitored by medical doctors in both countries.
Interviews were conducted first in Romania. Refusal rates were low, but higher in
Bulgaria than Romania (estimated at 35 vs 20%). Suspicion of government
involvement in the study was a commonly cited reason for refusal in the former. A
total of 160 persons were interviewed in both countries. To achieve this number in
Bulgaria interviews needed to be extended to a second village.

Follow-up interviews were attempted with the Bulgarian sample exactly one
year after the initial data collection, and it proved possible to trace and interview 58
(36.3%) of the original sample. The same principal measures were used, apart from
the assessments of chronic disease and social support, with some additions. Besides
the HAD-D scale, the 15 item Geriatric Depression Scale (GDS) (Sheikh, &
Yesavage, 1986) was also administered. Other additional variables assessed included
the ‘Beliefs and Values Scale’ (King et al, 2005), which provided an alternative
measure of strength of belief to the previous Royal Free Scale, and the
Religious/Spiritual Coping subscale of the Multidimensional Measure of
Religiousness/Spirituality for Use in Health Research (Fetzer Institute, 1999).
Results

Sample characteristics

Despite the apparent similarity of the villages there were notable differences between the two samples studied. As shown in Table 1, the Bulgarian sample, although only a little older in average age to the Romanian, contained significantly more women, more widows, and correspondingly more persons living alone. The Bulgarians also indicated that they were experiencing more financial difficulties.

TABLE 1

Prevalence of depressive symptoms

Both the Bulgarian and Romanian samples, but especially the Bulgarian, indicated high rates of depressive symptoms. Indeed the mean score for the Bulgarian sample (11.99) was over the HAD-D scale’s criterion for probable major depression. As Table 2 indicates depressive symptoms were expressed significantly more by females than males in both Bulgaria and Romania.

TABLE 2

Associations of depression with health, social support and recent life events

Table 3 indicates mean scores on the assessed variables which might account for the significantly higher depression rates between the Bulgarian and Romanian samples: age, limitations in physical functioning, number of chronic conditions, social support,
and number of recent life events, including bereavement over the last year (assessed also as a single item). These figures are separated for males and females.

TABLE 3

Most striking are the difference on the health variables. Bulgarians indicated significantly higher rates of chronic illness (especially diabetes, stroke, hypertension, and ear/eye disorders) and limitations of physical function than Romanians. Females also displayed more physical dysfunction than males in both countries.

The differences on the measure of social support are smaller and not statistically significant. However Romanians did indicate a significantly greater number of family members to whom they felt close (for Romanians a mean of 9.13 compared with 6.04 for Bulgarians). The other major difference was in regard to life events where the Bulgarians and particularly the Bulgarian women had suffered more recent life changes, in particular a close bereavement. It is plausible that both the higher morbidity and the higher bereavement rate might account for the higher level of depression among the sample of older Bulgarians.

Table 4 displays the Spearman correlations for depression with age, limits to physical function, number of chronic illnesses, social support and number of recent life events for the four groups. For both Romanian and Bulgarian males and for Bulgarian females the highest correlations are with limits to physical function, but for Romanian females lack of social support appears to be more important. Although there is no correlation with number of recent life events, recent bereavement was more frequent in the Bulgarian sample, and was associated with significantly increased depressive symptoms.
Consistent with the findings of the recent Eurobarometer report, the Romanian sample displayed much stronger levels of spiritual belief than the Bulgarian sample (Table 5). Both Romanian males and females also displayed much higher frequency of prayer (praying on average almost daily whereas the average for Bulgarians was less than monthly) but, interestingly, not of attendance at religious services (averaging near monthly in both countries). It is also noteworthy that whereas strength of belief and prayer were significantly associated in all four groups, moderately among Romanian males and females (0.39, 0.36 respectively) and more strongly among Bulgarian males and females (0.70, 0.70), the same did not apply to strength of belief and church attendance. Only among the Romanian males (0.24) and the Bulgarian females (0.47) was this association statistically significant.

Analysis revealed few associations between depression and the three religious variables studied (Table 6). There was a significant weak association between frequency of prayer and depression among Bulgarian females, and an approaching significant negative association between strength of belief and depression among Bulgarian males.

TABLE 5

Analysis revealed few associations between depression and the three religious variables studied (Table 6). There was a significant weak association between frequency of prayer and depression among Bulgarian females, and an approaching significant negative association between strength of belief and depression among Bulgarian males.

TABLE 6
Analysis of relationships between the religious/spiritual variables and other predictors of depression showed no significant relationships with social support or life events. However, limitations to physical function, and to a lesser extent age and chronic illness, were associated with lower levels of church attendance among Romanians and specifically Romanian females (-0.25, p<0.05 with limited physical functioning). By contrast and more importantly, higher levels of prayer among females (but not males) both in Bulgaria (0.46, p<0.01) and Romania (0.28, p<0.05) were also associated with increased limitations to physical function. A similar pattern was found for chronic illness in Bulgaria (0.23, p<0.05). This would suggest that prayer may be a coping response to increasing disability with age, at least among women. This suggestion is also supported by the additional associations found between physical limitation and spiritual belief and between depression and prayer among Bulgarian females.

**Multiple regression analyses**

Hierarchical multiple regressions were carried out to assess the independent prognostic role of the various factors found to be associated with depression. The independent variables were ordered in blocks, with block 1 consisting of age and gender, block 2 physical function, block 3 social support, and the last block each of the spiritual/religious variables in successive analyses.

In the Romanian sample, age and gender explained a significant percentage (14.1%) of the variance in depression (p< 0.01). Physical function added a significant increment of 5.5% (p< 0.01) and social support a further 10.9% of the variance (p< 0.01). Strength of spiritual belief, church attendance and prayer did not make a significant addition.
In the Bulgarian sample, the results were similar, but with one important difference. Age and gender explained 15% of the variance in depression (p<0.01), limitation in physical function a further 11.2% (p<0.01), and social support a further 5.5% (p<0.01). However in this sample strength of spiritual belief did make a further small but statistically significant addition (1.8%, p<0.05). Strength of belief, as social support, appeared as a protective factor against depression.

Follow-up study in Bulgarian sample

The subsample of the original Bulgarian sample interviewed one year later displayed a somewhat lower but still very high level of depressive symptoms, with a mean score of 10.84 on the HAD-D scale compared with 11.98 the previous year. Thus still half the sample scored above the criterion for probable depression. As many as 32 (55%) of the 58 interviewed in 2008 also scored at or above the criterion mark of 5 indicating probable depression on the short Geriatric Depression Scale.

Similar significant associations of depression with age, physical function and bereavement (over the last year) were identified as at the previous year’s assessment. In addition an association was found again between limited physical function and strength of belief (0.28, p<0.05) and the newly introduced measure of religious/spiritual coping (0.30, p<0.05), confirming the hypothesis that use of religion may be a coping response. Although correlations did not reach significance, a significant association was found between a GDS rating of probable depression and both a declared religious and/or spiritual understanding of life (chi square = 4.97, p=0.026) and a high level of strength of belief (chi square = 8.85, p=0.012).
An additional analysis was carried out on those ‘depressed’ and ‘not depressed’ (above and below the criterion for probable depression on the HAD-D scale) in 2007 and 2008. The measure of religious/spiritual coping in 2008 was significantly associated with the depression score in 2007 (0.33, p<0.05), but not in 2008 (0.12), which is consistent with the hypothesis that greater religious/spiritual coping is consequent upon depression. That a religious/spiritual attitude could also be beneficial is suggested by the fact that a comparison of those whose depression scores had declined over the year (n=30) with those whose scores had remained static or increased (n=28) had significantly higher strength of spiritual belief at baseline (p<0.05).

Discussion

As expected this study uncovered relatively high levels of expressed depressive symptoms in both Bulgaria and Romania, but the degree of difference found between the Bulgarian and Romanian samples was unexpected. To a large degree the much higher levels of depression in the former could be attributed to the greater physical morbidity and lower physical functioning evident in the Bulgarian sample. Other studies have pointed to the high prevalence of disease, particularly high rates of stroke, in the older Bulgarian population (Dragoeva-Bozhinova, 2004).

The higher reporting of depressive symptoms found in women in both Bulgaria and Romania was consistent with previous studies across a range of countries (Murakumi, 2002). Also consistent with previous studies was the finding that social support was negatively correlated to depressive symptoms in all cross-
sectional analyses. The Bulgarian sample displayed somewhat lower social support than the Romanian sample, so this could be a further factor in their higher levels of depression. However the differences in social support between the samples may be largely explainable by the higher widowed rates in Bulgaria. Although depression was not associated with number of recent life events, there was an association with widowhood over the course of the previous year in the Bulgarian sample. The same finding emerged in the smaller Bulgarian sample re-interviewed a year later.

The principal aim of the study was to investigate whether spiritual and religious variables might also contribute to the differences in depression. In this respect the findings are both equivocal and suggestive. Certainly the markedly lower rates of depression in the Romanian compared with the Bulgarian sample coincided with an equally significant higher level of strength of spiritual belief in Romania. However the within countries cross-sectional analyses did not provide evidence of a strong protective relationship between strength of spiritual belief, religiosity (attending church) or spirituality (prayer) and avoidance of depression. Nevertheless the importance of national differences in religiosity should not be discounted, since they have been associated with differential rates of protection against depression. Braam and colleagues, for example, found fewer depressive symptoms among female older people in countries, generally Roman Catholic, with high rates of regular church-attendance (Braam et al, 2001).

Religion is an important but neglected aspect of social capital. Whereas formal social capital describes participation in civil society or generalized (social) trust, informal social capital describes the density, strength and extensiveness of social networks (Pichler and Wallace, 2007). Bulgaria and Romania are both described as low on formal social capital and reliant on informal social networks. This is because
they have large rural populations and the transition after communism into the
European Union (EU) has been longer. In addition, integration deficits (feelings of
uselessness, inferiority and being left out of society) are more prevalent in Eastern
Europe (Boehnke, 2005). Bulgaria reports a fourth of its population lacking a sense of
belonging.

It is possible therefore that the greater religious, and associated communal, life
of Romanian society may in itself offer protection against depression. However it is
noteworthy that, in this study of particular rural areas, despite the much greater
evidence for spiritual practice (prayer) in Romania, church attendance was just as
high in Bulgaria. It may well be that Bulgarian older people no less than Romanian
attend church also as part of traditional community social practice.

At the intrapsychic level, actual degree of spiritual belief may be important to
mental health in more complex ways. Some previous studies have shown curvilinear
relationships between strength of spiritual belief and mental health variables including
depression, with those of strong or no belief doing better than those of weak or
moderate belief (Miller et al, 2005; Wink & Scott, 2005; Coleman, McKiernan, Mills,
& Speck, 2007). We did not find any significant patterns in this regard in these data
sets.

However research needs to be longitudinal if it is to provide more definitive
answers on the role of religion in the etiology of depression. Clinical depression is a
recurring disease and cross-sectional data has limited capacity to assess reverse
causality. We were able to explore these issues in the follow-up study in Bulgaria
with interesting results which both confirm the importance of religious/spiritual
coping and also suggest that strong spiritual belief may be associated with a better
prognosis of recovery from depression. This accords with previous literature
demonstrating associations between religiousness and remission from depression (Braam, Beekman, Deeg, Smit, & van Tilburg, 1997; Koenig, George, & Peterson, 1998). More longitudinal study is required with different types of samples in various religious cultures to test this hypothesis further. It is also necessary to be aware of the possibility that the associations between depression and religious involvement may reflect causation in both directions (Braam et al, 2004).

Although we were able to collect relatively large samples of older people in Bulgaria and Romania, even greater numbers are probably necessary to effectively study the complex relationships between religiosity and mental health, as well as the mediating roles of social support and physical health. In the US consistent protective relationships of religiosity on depression have been found but averaging only 0.1 (Smith et al, 2003).

The study did confirm the relative ease with which disadvantaged and depressed older people can be approached for interview in Eastern European countries. Door to door knocking produced a good response, and likely uncovered higher levels of depression than interviewing out of doors. Eastern Europe currently provides an important testing ground for investigating factors contributing to depression, and most importantly resilience to depression, in later life. Older Eastern Europeans report much chronic social stress resulting from an inability to change their state of economic and political uncertainty. The instabilities and pervasive sense of lack of control that they have experienced have had psychological impacts upon their health. Future research could include assessment of variables such as belief in chance or powerful others (including health professionals), pessimism and fatalism (Steptoe & Wardle, 2001).
Choice of the most appropriate method for assessing depression is also important. We suspected that use of the HAD-D scale might have exaggerated depressive symptomatology in an older population, in particular the item ‘I feel as if I am slowed down’ to which the overwhelming majority of older Bulgarians (but, interestingly, not the Romanians) gave the maximum negative response. However use of the GDS did not result in a lower estimate. We have to conclude that depressive symptomatology is remarkably high among current older Bulgarians. This may well be related to the greater prevalence of vascular disease noted among Bulgarians which has been shown in US studies to predict future depression (Mast et al, 2008).

Eastern European countries face the difficult challenge of growing old before they become wealthy. Bulgaria is an extreme example of this phenomenon (Rangelova, 2003). Its mental health services in particular remain underdeveloped (Tomov, Mladenova, Lazarova, Sotirov, & Okoliyski, 2004). In developing these services it is important to build in consideration for the cultural and social context. Physicians need training in enhancing patients’ own resources in managing their illness. One of the most important social supports for older people’s mental health is religion and spirituality. To harness such resources more effectively physicians need to learn to work together with religious ministers as well as others involved in pastoral care (Leavey, & King, 2007).

References


TABLE 1. Characteristics of the Samples in Romania and Bulgaria

<table>
<thead>
<tr>
<th></th>
<th>Romania</th>
<th>Bulgaria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numbers</strong></td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>91 (56.9%)</td>
<td>62 (38.8%)</td>
</tr>
<tr>
<td>Female</td>
<td>69 (43.1%)</td>
<td>98 (61.3%)</td>
</tr>
<tr>
<td><strong>Mean Age</strong></td>
<td>71.36 years</td>
<td>72.56 years</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>110 (68.8%)</td>
<td>85 (53.1%)</td>
</tr>
<tr>
<td>Widowed</td>
<td>39 (24.4%)</td>
<td>65 (40.6%)</td>
</tr>
<tr>
<td>Single</td>
<td>3 (1.9%)</td>
<td>3 (1.9%)</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>8 (5.1%)</td>
<td>7 (4.4%)</td>
</tr>
<tr>
<td><strong>Financial Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘Comfortable’</td>
<td>23 (14.4%)</td>
<td>12 (7.5%)</td>
</tr>
<tr>
<td>‘Getting by’</td>
<td>85 (53.1%)</td>
<td>70 (43.8%)</td>
</tr>
<tr>
<td>‘Difficult’</td>
<td>52 (32.5%)</td>
<td>78 (48.8%)</td>
</tr>
<tr>
<td><strong>Living Alone</strong></td>
<td>21 (13.1%)</td>
<td>39 (24.4%)</td>
</tr>
</tbody>
</table>
Table 2: Summary of mean depression scores
(HAD-D scale) amongst females and males

<table>
<thead>
<tr>
<th></th>
<th>Romania</th>
<th>Bulgaria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>6.32</td>
<td>10.45</td>
</tr>
<tr>
<td>Females</td>
<td>8.59</td>
<td>12.97</td>
</tr>
</tbody>
</table>
Table 3: Mean scores on age, limits to physical function, chronic illness, social support and life events variables for males and females in Romania and Bulgaria

<table>
<thead>
<tr>
<th></th>
<th>Romanian</th>
<th></th>
<th>Bulgarian</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>females</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>Age</td>
<td>70.78</td>
<td>72.12</td>
<td>72.34</td>
<td>72.69</td>
</tr>
<tr>
<td>Limits to Physical Function</td>
<td>14.33</td>
<td>17.52</td>
<td>18.61</td>
<td>21.77</td>
</tr>
<tr>
<td>Number of Chronic Illnesses</td>
<td>1.29</td>
<td>1.96</td>
<td>1.98</td>
<td>2.47</td>
</tr>
<tr>
<td>Social Support</td>
<td>80.93</td>
<td>78.28</td>
<td>80.58</td>
<td>75.04</td>
</tr>
<tr>
<td>Number of Recent Events</td>
<td>1.08</td>
<td>0.99</td>
<td>1.29</td>
<td>1.84</td>
</tr>
<tr>
<td>% Recent Bereavement</td>
<td>4%</td>
<td>1%</td>
<td>11%</td>
<td>21%</td>
</tr>
</tbody>
</table>
Table 4: Spearman rank bivariate correlation coefficients of depression with age, limits to physical function, chronic illness, social support, and life events variables

<table>
<thead>
<tr>
<th></th>
<th>Romanian Males</th>
<th>Romanian females</th>
<th>Bulgarian Males</th>
<th>Bulgarian Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.298**</td>
<td>0.228</td>
<td>0.184</td>
<td>0.371**</td>
</tr>
<tr>
<td>Limits to Physical Function</td>
<td>0.361**</td>
<td>0.282*</td>
<td>0.435**</td>
<td>0.430**</td>
</tr>
<tr>
<td>Number of Chronic Illnesses</td>
<td>0.133</td>
<td>0.129</td>
<td>0.415**</td>
<td>0.261**</td>
</tr>
<tr>
<td>Social Support</td>
<td>-0.326**</td>
<td>-0.456**</td>
<td>-0.165</td>
<td>-0.333**</td>
</tr>
<tr>
<td>Recent Life Events</td>
<td>-0.024</td>
<td>0.111</td>
<td>0.080</td>
<td>-0.091</td>
</tr>
</tbody>
</table>

**= Statistically significant at the p < 0.01 level

*= Statistically significant at the p < 0.05 level
Table 5: Mean scores for strength of spiritual belief, prayer and church attendance in Romanian and Bulgarian males and females

<table>
<thead>
<tr>
<th></th>
<th>Romanian</th>
<th></th>
<th>Bulgarian</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>females</td>
</tr>
<tr>
<td>Strength of belief</td>
<td>46.54</td>
<td>49.01</td>
<td>23.26</td>
<td>33.80</td>
</tr>
<tr>
<td>Frequency of prayer</td>
<td>5.56</td>
<td>5.83</td>
<td>1.79</td>
<td>2.23</td>
</tr>
<tr>
<td>Frequency of church service attendance</td>
<td>2.71</td>
<td>3.19</td>
<td>2.47</td>
<td>3.67</td>
</tr>
</tbody>
</table>
Table 6: Spearman rank bivariate correlation coefficients for strength of spiritual belief with depression in Romanian and Bulgarian males and females

<table>
<thead>
<tr>
<th></th>
<th>Romanian</th>
<th></th>
<th>Bulgarian</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>females</td>
</tr>
<tr>
<td>Strength of belief</td>
<td>0.047</td>
<td>-0.157</td>
<td>-0.233</td>
<td>0.064</td>
</tr>
<tr>
<td>Frequency of prayer</td>
<td>0.135</td>
<td>-0.068</td>
<td>-0.154</td>
<td>0.244*</td>
</tr>
<tr>
<td>Frequency of church service attendance</td>
<td>-0.114</td>
<td>0.085</td>
<td>-0.165</td>
<td>-0.004</td>
</tr>
</tbody>
</table>

**= Statistically significant at the p < 0.01 level
*= Statistically significant at the p < 0.05 level