Review Article

Coping and Depression in Old Age: A Literature Review

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Key Words

Coping · Depression · Older persons

Abstract

Background/Aims: The interest in the relation between coping and depression in older persons is growing, but research on the concepts and instruments of coping in relation to depression among older persons is scarce and systematic reviews are lacking. With this background, we wanted to gain a systematic overview of this field by performing a systematic literature search. **Methods:** A computer-aided search in MEDLINE, CINAHL, PsycINFO, Embase, PubMed and www.salutogenesis.fi was conducted. We systematically searched for studies including coping and depression among persons 60 years of age and above. The included studies were evaluated according to predefined quality criteria. **Results:** Seventy-five studies, 38 clinical and 37 community settings, were included. Of these, 44 were evaluated to be of higher quality. Studies recruiting samples of older persons with a major depressive disorder, moderate or severe cognitive impairment or those who were dependent on care were scarce, thus the research is not representative of such samples. We found a huge variety of instruments assessing resources and strategies of coping (55 inventories). Although we found the relation between resources and strategies of coping and depression to be strong in the majority of studies, i.e. a higher sense of control and internal locus of control, more active strategies and positive religious coping were significantly associated with fewer symptoms of depression both in longitudinal and cross-sectional studies in clinical and community settings. **Conclusion:** Resources and strategies of coping are significantly associated with depressive symptoms in late life, but more research to systematize the field of coping and to validate the instruments of resources and strategies of coping in older populations is required, especially among older persons suffering from major depression and cognitive decline.

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Introduction

According to a review article by Rosenvinge and Rosenvinge [1], 10–19% of older persons in the general population suffer from symptoms of depression, and 2–4% suffer from a major depressive disorder. Among older people living in an institution, a systematic review reports a median prevalence of major depression of 10%, and of depressive symptoms in 29% of the residents [2, 3]. Another study showed that about 50% of elderly people in long-term care suffer from depressive symptoms and 20% from major depression [4]. A further study reported that about 30% of all referrals to the specialist psychiatric health service are older people suffering from depression [5]. Since older persons constitute the fastest growing part of the population and because depression is among the most common psychiatric disorders in this group, the future cost of depression to the patient, the carer and the health services will be significant [6].

In a review on prognostic factors for depression in older persons the following variables were found to lead to a poor prognosis: older age, chronic somatic comorbidity, more functional limitations, a higher baseline depression level and the locus of control (LOC) being more external than internal [7]. In a systematic review comparing the prognosis for depression in different age groups, remission rates of depression show little difference between middle-aged and older persons, but relapse rates appear higher in older persons [8]. Depression in older people is related to increased mortality [9]. This makes it important to further investigate the prognosis for older persons suffering from depression and to include the concept of coping, as this factor is reported to be relevant in the understanding of depression in older persons [10, 11].

The Concept of Coping

The concept of coping was first adopted by psychologists in the 1960s and 1970s and was applied to refer to the struggle of overcoming and managing the stresses of living and adapting [12]. Different theoretical perspectives have defined coping as personality traits where the way a person copes is determined by the kind of person they are [13], and as a process where coping is seen as a situation-specific and flexible state [12]. Situational factors may be the changeability or controllability of a situation, and personality factors may include the aspects of self-confidence, self-efficacy [14] and LOC [15], two central concepts of the theories of personality called control orientation that constitutes parts of a person's total available coping resources [16]. LOC relates to the generalized expectations regarding who or what is responsible for the outcomes. If the person attributes the outcome to luck or powerful others, the belief is labeled external control, and if the relation is attributed to personal effort, the belief is labeled internal control [15, 17]. Self-efficacy refers to the perception that one has the abilities to enact these responses [14], and sense of control (SOC) [18] is understood as the perception of control in a certain situation [16].

According to a transactional perspective on coping, the person and the environment are understood to be in an ongoing reciprocal relationship, where the stressors in life are evaluated in an appraisal process according to the perceived personal resources (i.e. control orientation, self-efficacy) and choices available to the coping person to manage the challenges [19]. Coping, as described by Folkman and Lazarus [19], involves different strategies to alter the stressful situation (i.e. problem-focused coping), as well as efforts to regulate the emotional distress associated with the situation (i.e. emotion-focused coping). The strategies chosen depend both upon situational and individual factors: the coping resources. Other theorists have further developed different concepts of coping related to the coping strategies of Folkman and Lazarus [20, 21], like coping actions and coping style [22, 23].

Also, Pargament [24] shows that the subjective meaning or orientation of values like religiosity is important for decisions and thus serves as part of the system of coping resources that form the basis of the chosen coping strategies, activities and actions. According to Pargament [24], the concept of religiosity can be studied through the entire process of coping in terms of stressors, appraisal, orientation of values, activities and outcome. Conceptually, processes of coping concerning religiosity have become a specific category of coping called ‘religious coping’. Religious coping has been operationalized in different ways, but basically as an instrument to measure either religious beliefs or behavior that serve as coping strategies to help manage emotional distress [25]. Religious coping can be positive, like spiritual support and positive religious reframing, or negative, i.e. seeing the illness as God’s punishment [26]. Antonovsky [27], on the other hand, emphasizes that coping is a resource and is, therefore, seen as a personal capacity that can be used in stressful situations to maintain positive health and achieve well-being. To achieve this positive outcome of coping a certain way of viewing the world is required, a perceived SOC, described as ‘... a dispositional orientation toward stressors, characterized and operationalized by a view of life as being comprehensible, manageable and meaningful’ [28]. A high SOC is found to be associated with good mental health [29]. Hence, the concept of coping reflects different parts and perspectives of the coping process. A critical event or stressor may be experienced as a minor or major life event depending on the available internal and external resources, and has to be understood in terms of the subjective meaning and orientation of values. Resources of coping determine outcome, after being mediated by different coping strategies and activities [24].

The growing interest in coping among older persons has stimulated research in the field, but the body of research on coping in relation to depression in old age is scarce. A systematic review would contribute to a better understanding of the field today and may contribute to meeting a growing interest from personnel in both the specialist and primary health care service who serve depressed older persons. On this basis we conducted a systematic computer-based literature review, including studies where the participants had a mean age of 60 years or more, and where different concepts of coping were studied in relation to depression.

Method

Selection of Studies

Two researchers (S.E.K./G.H.B.) and a librarian (L.M.W.) conducted systematic, computer-aided searches in MEDLINE, PsycINFO, Embase and CINAHL (last search 11.07.2012). The terms used for searching the databases were ‘aged’, ‘aged, 80 and over’, ‘gerontology, aged (attitudes toward)’, ‘aging’, ‘geriatric psychiatry’, ‘geriatric psychotherapy’, ‘geriatric patient’, ‘elderly’, ‘elder care’, ‘depression’, ‘depressive disorder’, ‘depressive disorder, major’, ‘depression reactive’, ‘affective disorder’, ‘psychotic, endogenous depression’, ‘long-term depression’, ‘organic depression’, ‘reactive depression’, ‘coping’, ‘ways of coping questionnaire’, ‘locus of control’, ‘coping behavior’, ‘internal external LOC’, ‘exp. coping behavior’, ‘sense of coherence’ and ‘SOC’. The MeSH terms and CINAHL headings were limited to major concepts (focused), except the CINAHL heading ‘internal external LOC’, which became an ‘exploded’ search. The keywords, CINAHL headings and MeSH terms were combined in different ways to yield maximum results. This paper reviews published research studies on coping in relation to depression in older persons, focusing on:

- (i) Identifying which categories of coping have been studied
- (ii) The study design
- (iii) The characteristics of the sample
- (iv) The aim of each study
- (v) Identifying which generic measures of coping have been used
- (vi) The primary findings of the studies regarding the relationship between coping and depression in older persons

Papers were included in the review if the following criteria were met:

- Mean age ≥ 60 years

- A quantitative design
- Instrument used to assess depression was exclusive to this purpose
- At least one generic measure of coping was used
- An assessment of the relationship between coping and depression was performed
- The study was published in a journal and appeared in the English language

Papers were excluded from the review if:

- They were theoretical, qualitative or review articles or comments on studies
- They were disseminations

In total 1,727 hits were screened for potentially relevant papers among titles and abstracts; 164 articles were then retrieved for full-text evaluation of the inclusion criteria by two of the authors (A.-S.H./G.H.B.). Reference lists were checked to retrieve relevant publications which had not been identified by the computer-aided search. Potentially relevant articles retrieved from disseminations were included. Finally, 66 articles were evaluated by two researchers (A.-S.H./G.H.B.) as fulfilling the inclusion criteria and were further analyzed and their relevant data extracted in the form of tables. In addition, a search of the database www.salutogenesis.fi was conducted (G.H.B.; 30.06.2012) and 41 potentially relevant articles were retrieved. Of these, 9 articles met the inclusion criteria. Thus, 75 articles from five databases were evaluated as meeting the criteria for inclusion in this review.

Quality Assessment

The methodological quality of each of the studies was assessed by two of the authors (G.H.B./A.-S.H.), based on theoretical considerations and methodological aspects and according to a checklist of predefined criteria as described by Licht-Strunk et al. [7] and Oxman [30]. The list contains 7 quality criteria. A study receives 1 point for each of the following criteria: (i) being a longitudinal study, (ii) containing information about the setting, (iii) including more than 100 participants and (iv) applying a definition of coping with reference to the literature; 2 points are given for each of the following criteria: (v) information about the diagnosis of depression according to criteria in the Diagnostic and Statistical Manual of Mental disorders (DSM) or the International Classification of Diseases (ICD), (vi) use of well-established measures of depression and (vii) use of well-established measures of coping (table 1). We chose to give these 3 latter criteria 2 points because valid and reliable information about the assessment of coping and depression in the studies was regarded to be of outmost importance to the evaluation of a relation between coping and depression, which is the main focus of this review. A total score was calculated by summing the number of positively scored criteria (range 0–10). We chose to consider a study as ‘high quality’ when it scored more than 5 points ($\geq 60\%$ of the maximum attainable score of 10) and ‘low quality’ when it scored 5 points or less [7].

Results

Samples of Older Persons

Of the 75 studies in total, 38 were clinically based and 37 were community based. Of the clinically based studies, 26 were conducted in hospitals or in GP practices, 6 in psychogeriatric clinics, 4 in nursing homes and 2 studies were from memory clinics. The clinical studies included patients with a variety of disorders such as depression in 12 studies, somatic disorders in general (not specified) in 11, different cardiac disorders in 8, cognitive impairment in 2, Parkinson’s disease in 2, cancer in 2 and pain disorders in 1 study (tables 2, 3).

Quality of the Studies

In total, 24 studies had a longitudinal and 51 had a cross-sectional design (tables 2, 3). Two studies met all 7 quality criteria and received 10 points, 3 studies got 9 points, 6 studies got 8 points, 16 studies received 7 points and 17 studies got 6 points. Thus, 44 of the 75 studies received 6 points or more and were evaluated to be of relatively high quality (18 longitudinal and 26 cross-sectional studies). The studies which received less than 6 points were mainly characterized by the following: not having a longitudinal design, the number of participants was below 100, a diagnostic evaluation of depressive disorders was not

Table 1. Quality assessment

Ref. No.	Prospective design	Setting defined	n ≥ 100	Diagnosis of depression: ICD/DSM	Well-established measure of depression	Well-established measure of coping	Definition of coping with reference to literature	Score +/- max 10
<i>Studies of 6 or more quality criteria</i>								
26	1	1	1	2	2	2	1	10
55	1	1	1	2	2	2	1	10
66	–	1	1	2	2	2	1	9
49	–	1	1	2	2	2	1	9
56	1	1	1	2	2	2	–	9
45	1	1	1	–	2	2	1	8
50	1	1	1	2	2	–	1	8
67	1	1	–	2	2	2	–	8
68	1	1	1	–	2	2	1	8
58	–	1	–	2	2	2	1	8
59	–	1	–	2	2	2	1	8
62	–	1	1	–	2	2	1	7
47	1	1	–	–	2	2	1	7
64	–	1	1	–	2	2	1	7
69	–	1	1	–	2	2	1	7
70	1	1	1	–	2	2	–	7
71	1	1	–	–	2	2	1	7
72	1	1	1	–	2	2	–	7
66	1	1	–	–	2	2	1	7
73	1	1	1	–	2	2	–	7
52	1	1	–	–	2	2	1	7
74	–	1	1	–	2	2	1	7
75	–	1	1	–	2	2	1	7
76	–	1	1	–	2	2	1	7
77	–	1	1	–	2	2	1	7
78	–	1	1	–	2	2	1	7
79	–	1	1	–	2	2	1	7
80	1	1	1	–	2	–	1	6
25	1	1	1	–	2	–	1	6
41	–	1	1	2	2	–	–	6
81	–	1	1	–	2	2	–	6
35	–	1	–	–	2	2	1	6
28	–	1	–	–	2	2	1	6
60	–	1	–	2	–	2	1	6
82	–	1	1	–	2	2	–	6
83	–	1	–	–	2	2	1	6
46	–	1	1	–	2	2	–	6
84	–	1	–	–	2	2	1	6
85	1	1	1	–	2	–	1	6
86	–	1	1	–	2	2	–	6
87	–	1	1	–	2	2	–	6
88	–	1	1	–	2	2	–	6
89	–	1	1	–	2	2	–	6
57	1	1	–	2	2	–	–	6

Table 1 (continued)

Ref. No.	Prospective design	Setting defined	n ≥100	Diagnosis of depression: ICD/DSM	Well-established measure of depression	Well-established measure of coping	Definition of coping with reference to literature	Score +/- max 10
<i>Studies of 5 or less quality criteria</i>								
90	–	1	1	–	–	2	1	5
61	–	1	1	–	–	2	1	5
91	1	1	1	–	–	2	–	5
92	1	1	1	–	2	–	–	5
93	1	1	–	–	–	2	1	5
94	–	–	1	–	2	2	–	5
95	–	1	1	–	2	–	1	5
96	1	1	1	–	2	–	–	5
44	–	1	–	–	2	2	–	5
53	–	1	1	–	2	–	1	5
97	–	1	–	–	2	2	–	5
98	–	1	1	–	2	–	–	4
99	–	1	–	–	2	–	1	4
36	–	1	–	–	2	–	1	4
42	–	1	–	–	2	–	1	4
100	–	1	1	–	2	–	–	4
101	–	–	–	–	2	2	–	4
43	–	1	1	–	2	–	–	4
102	–	1	1	–	2	–	–	4
40	1	–	1	–	2	–	–	4
103	–	1	1	–	–	–	1	3
104	–	1	–	–	2	–	–	3
105	–	1	–	–	2	–	–	3
48	–	1	–	–	2	–	–	3
106	–	1	1	–	–	–	1	3
107	–	1	–	–	2	–	–	3
108	–	1	–	–	–	2	–	3
109	–	1	1	–	–	–	1	3
110	–	1	–	–	2	–	–	3
111	1	1	–	–	–	–	–	2
112	–	1	–	–	–	–	–	1

applied, the use of well-established instruments to assess coping was not included and, lastly, a definition of the concepts of coping was not described with a reference to the literature (table 1).

Assessment of Depression

Information about depressive symptoms was obtained from self-report instruments, observation inventories, structural interviews, or from diagnostic evaluations applying the DSM-III/-R/IV criteria (table 4). A total of 21 different instruments were used in the studies to assess the symptoms of depression. The Center for Epidemiological Studies – Depression scale (CES-D) [31] was most often applied (24 studies). Four studies used a scale constructed for the specific study (table 4).

Concepts and Assessments of Coping

In all, 55 different measures of coping were applied in the 75 studies, and the instruments were found to be related theoretically with the following four clusters: (i) sense of coherence, (ii) various instruments of control orientation, (iii) coping strategies, style or actions (referred

to as coping strategies hereafter), and (iv) religious coping. These clusters are again found to represent two different, but related parts of the coping process, resources and strategies of coping. The coping concepts, sense of coherence and control orientation, are both theoretically referred to as resources of coping [16, 32]. Religious coping may be understood both as a strategy of coping representing religious activities [24] and as resources of coping, when religiosity can serve as a system of values that may guide the individual's choices of coping strategies in times of stress [33, 34]. The concept of religious coping is based on the theories of Folkman and Lazarus [19], and is thus related as strategies of coping [33].

In total, 9 studies included more than one of the four clusters of coping, and these were a combination of an instrument of control orientation and coping strategies in 7 studies and between control orientation and religious coping in 2 studies [35, 36] (tables 2, 3). The Sense of Coherence scale [37] was the most frequently used instrument and was applied in 9 studies (table 5). Among the total of 18 different instruments assessing control orientation, 3 instruments (the Internal/External Control of Reinforcement scale [15], the Multi-Health Locus of Control scale [38] and the Internal Locus of Control (mastery) [39]) were applied in 6 studies each (table 5). Five studies used instruments to assess control orientation specifically made for those studies. Regarding the 30 different instruments of coping strategies, the COPE inventory was applied most often, in 4 studies. Three studies used instruments of coping strategies specifically made for those studies. Among the 7 different instruments of religious coping, the Religious Coping index was most often applied, in 5 studies (table 5).

Assessment of Coping in Samples of Older Persons

No studies reported information about difficulties with administration of the coping instruments in older participants. However, 11 studies excluded participants with cognitive impairment, a diagnosis of dementia or major depression [40–50]. Three studies (1 from a nursing home, 1 community-based study and 1 study from a memory clinic) excluded items regarded as irrelevant to the situation of the participant [51–53]. Of the studies of older persons suffering from depression, cognitive impairment, or from nursing homes, 10 studies screened their participants for cognitive impairment, and 9 applied the Mini-Mental Status Examination (MMSE) [26, 35, 51, 54–61]. The criteria of exclusion varied from MMSE ≤ 6 to 25 points, but most often a cutoff at 24 and 25 points was used.

Older Persons Coping with Depression

In the 44 studies with a quality score of 6 or more points, the main finding was of a strong association between resources and strategies of coping and depression, and this association appeared to be stable over time.

Sense of Coherence

All 9 studies using SOC were of higher quality (2 longitudinal and 7 cross-sectional studies; table 1). Of these 9 studies, 4 recruited participants from community settings and 5 recruited older persons from clinical settings of whom 3 studies were from somatic hospitals, including participants after suicide attempts (2 studies) and older persons with somatic disorders (1 study). Further, 1 study included depressed older persons from psychogeriatric clinics and 1 study included participants from nursing homes with different somatic disorders. These studies reported a negative relationship between SOC and depressive symptoms (tables 2, 3). In the longitudinal studies, a higher total score on the SOC at baseline was related to fewer depressive symptoms at follow-up among participants, and was associated with a lower score on a depression scale in a nonremission group of depressed suicide attempters. The cross-sectional studies reported that higher total SOC scores were associated with lower scores on the depression scales. One study reported a negative association between SOC and

Table 2. Longitudinal studies (n = 24)

Ref. No. (country)	Aim of study ¹	Sample characteristics	Instruments used to assess depression	Category ² and instruments used to assess coping
<i>Studies of 6 or more quality criteria</i>				
26 (USA)	To study the relation between religiousness and depression outcome after considering clinical factors	114 older patients from a psychogeriatric clinical setting with major depression MA = 67.4 years, SD = 6.2 years, 63% females	DSM-IV MADRS (T1–T2)	<i>Religious coping</i> Public religious activities (T1) Private religious activities (T1) RCOPE (T1)
55 (USA)	To examine the efficacy of augmenting antidepressant medication and medication combined with dialectical behavior therapy intervention for adaptive coping	34 older patients from a psychogeriatric clinical setting with depression MA = 66 years, SD = 5 years, 85% females	Ham-D (T1–T3) DDES (T1–T3) BDI (T1–T3) DSM-III, DSM-III-R, DSM-IV	<i>Coping strategies</i> CSQ (T1–T3)
56 (Sweden)	To investigate 1-year outcomes in suicide attempters aged 70+ and to identify predictors of these outcomes	101 older patients from somatic health care setting hospitalized after a suicide attempt MA = 79.7 years, SD = 4, 9, 31, 7% females	DSM-IV (T1+T2) MADRS (T1+T2)	<i>Sense of coherence</i> SOC-29 (T1+T2)
45 (Germany)	To determine the relation between self-perceived health, SOC and measures of subjective well-being and depression	74 older patients from a somatic health care setting, hospitalized for geriatric disorders MA = 77.4 years, SD = 6, 7, 63, 5% females	HADS (T1+T2)	<i>Sense of coherence</i> SOC-29 (T1+T2)
50 (USA)	To identify the predictors of late-life depression that are amenable to change and may lead to interventions resulting in better and faster remission	271 older patients from a somatic health care setting, treated for depression <59 years	DSM-IV (T1+T2+T3+T4+T5+T6) HRSD (T1+T2+T3+T4+T5+T6)	<i>Control orientation</i> The Optimization in Primary and Secondary Control survey (T1+T2+T3+T4+T5+T6)
67 (Australia)	To study exercise as an antidepressant and to explore relations between participant characteristics and treatment result	60 older patients from a somatic health care setting included in a randomized controlled trial with depression ≥60 years, 55% females High-intensity training group (n = 20) Low-intensity training group (n = 20) Receiving GP care (n = 20)	DSM-IV Ham-D (T1–T2) GDS (T1–T2)	<i>Control orientation</i> Outcome expectation (T1) MHLC (T1) Self-Efficacy scale (T1)
113 (USA)	To examine whether LOC beliefs buffer or mediate the impact of chronic financial strain on depression	351 older community residents MA = 73.4 years, SD = 6.2 years, 66% females	CES-D (T1–T2)	<i>Control orientation</i> I/E scale (T1–T2)
47 (UK)	To study if perceived control belief was associated with depression and if depression mediated this effect	71 older patients from a somatic health care setting within 3 weeks of an acute stroke MA = 69.4 years, SD = 9.2 years, 49.3% females	HAD (T1–T3)	<i>Control orientation</i> <i>Coping strategies</i> RLOC (T1–T3) Exercise coping (T1–T3)

Time of assessment	Findings at baseline	Findings at follow-up	Findings of no relation	Comments on method
T1: Baseline T2: 6 months	Higher levels of public religious practice and positive religious coping were associated with reduced depressive score, and low negative religious coping was associated with decreased depressive score	Higher levels of positive religious coping at T1 were associated with lower depressive scores at T2	Higher levels of public religious practice, private religious practice and negative religious coping at T1 were not related to lower depression score at T2	Multivariate regression analysis Adjusted for age, gender, education, social support, number of depressed episodes and ECT both at baseline and follow-up
T1: pretreatment T2: 28 weeks posttreatment T3: 6 months		Patients receiving medication + dialectical behavioral therapy showed higher adaptive coping from T1 to T2	There was no relation between group difference at T2 or T3 in adaptive coping	Repeated-measures ANOVAs Modified Bonferroni correction
T1 = 11 median days after suicide attempt T2 = 391 median days after baseline		Higher total SOC score and lower depression at T1 were associated factors in non-remission group at T2		2-tailed, paired t test. Fisher's exact test. Multivariate logistic regression analyses.
T1 = Baseline T2 = 5 years		A higher total SOC score at T1 was correlated with reduced depressive symptoms at T2		Pearson's correlation
T1 = baseline T2 = 4 months T3 = 8 months T4 = 12 months T5 = 16 months T6 = 24 months	Persons with high anxiety and engagement had lower depression severity than those with high anxiety and low engagement	Greater disengagement (from unattainable health goals) at baseline predicted shorter time before remission	Use of engagement strategies was not associated with time before depression remission	Pearson's partial correlation Adjusted for depression severity. Univariate linear regression. Multivariate cox proportional hazard models (adjusting for age, gender, intervention, physical illness, baseline depression score)
T2: 8 weeks after intervention		A high outcome expectation at T1 was related to reduction in depressive score in the low intensity training group at T2	LOC and self-efficacy at baseline were not related to reduction of depressive symptoms at follow-up A high baseline outcome expectation was not related with reduction in depressive score in the other groups at follow-up	Comparison between the groups (ANCOVA and ANOVA)
T1: Baseline T2: 1½ years (mean 18.7, SD = 1.9 months) (n = 265)		LOC at T1 buffers the effect of chronic financial strain on depression Stronger internal control belief at T2 is associated with reduced impact of financial strain at depressed affect at T2		Hierarchical multiple linear regression analysis Adjusted for financial strain
T1: 10–12 days after stroke T2: 1 month after discharge T3: 6 months after discharge		Higher perceived control (at T2 and T3) correlated moderately with reduced depressive score at T2 and T3, but was not mediated by depression		Correlations Regression analysis

Table 2 (continued)

Ref. No. (country)	Aim of study ¹	Sample characteristics	Instruments used to assess depression	Category ² and instruments used to assess coping
70 (USA)	To describe the natural history of adaptation to stroke and to identify survivor predictors of depressive symptoms	53 older patients from a somatic health care setting receiving acute rehabilitation after stroke MA = 60.1 years, SD = 11.9 years, 37% females	CES-D (T1–T4)	<i>Coping strategies</i> , <i>control orientation</i> Cognitive appraisal (T1–T4) WOCQ (T1–T4) LOT (T1–T2, T4)
71 (Canada)	To describe changes in the adaption process for stroke survivors and spouses for appraisal and coping, and identifying domains of the adaption process related to depression	88 older patients from a somatic health care setting, assessed within the first 2 weeks poststroke MA = 71.8 years, SD = 10.8 years, 37% females 47 spouses MA = 69.2 years, SD = 11.2, 76.6% females	BDI (T3)	<i>Coping strategies</i> SAM (T1–T3) RWCQ (T1–T3)
72 (USA)	To study the impact of known predictor variables (among coping) for depression within an urban population	110 older community residents with depressive symptoms ≥55 years, 52% females	CES-D (T1–T2)	<i>Control orientation</i> Mastery scale (T1)
114 (Netherlands)	To examine the relation between cognitive coping strategies and depressive symptoms in old age when adjusting for depressive symptoms over time	99 older community residents MA = 77.2 years, SD = 6.1 years, 48% females	GDS (T1–T2)	<i>Coping strategies</i> Cognitive Emotion Regulation questionnaire (T2)
73 (Sweden)	To examine change in depressive symptoms over time and study correlates of depressive symptoms by known risk factors and mastery	254 of the oldest old community residents in municipalities, independent of living accommodation MA = 86.7 years, 64% females	CES-D (T1–T2)	<i>Control orientation</i> Mastery scale (T1)
52 (USA)	To study what group of older adults benefits most from a control-enhancing intervention and whether LOC moderates the benefit derived	27 older patients from a nursing home setting randomized for having the opportunity to care for a plant (10 older persons) or standard care (17 older persons) MA = 81 years, SD = 9.29 years, 70% females	GDS SF (T1–T2)	<i>Control orientation</i> I/E scale (T1)
80 (Australia)	To study if SOC mediated the relation between driving status and depressive symptoms	700 older community residents MA = 75.1 years, SD = 4.7 years, 27.4% females	CES-D (T1–T2)	<i>Control orientation</i> Desired Control Measure (T1–T2)

Time of assessment	Findings at baseline	Findings at follow-up	Findings of no relation	Comments on method
T1: prior to discharge from acute rehabilitation T2: 6–10 weeks post-discharge to home T3: 12 months post-discharge T4: 2 years postdischarge	Higher levels of finding meaning and lower avoidance coping were associated with lower levels of depressive symptoms	Higher score of cognitive appraisal of support at T1 was associated with lower depressive symptoms at T4	Optimism (Life Orientation test) at T1 was not associated with depressive symptoms at T4	Hierarchical regression analysis Adjusted for lower levels of support at T1 Hierarchical analysis adjusted for degree of illness severity and depressive score at T1 Hierarchical analysis. Adjusted for illness severity, social environmental situation and cognitive appraisal of impact at T4, Life Orientation test (excluded from analysis)
T1: 2 weeks post-stroke T2: 3 months T3: 6 months poststroke		Higher challenge and lower centrality scores of the primary appraisal measure at T1 for patients and spouses were associated with lower depressive score at T3	Secondary appraisal, experience of stressfulness and the other coping variables at T1 were not associated with depressive symptoms at T3	General linear model of repeated measures Pearson's correlation Multiple linear regression model
T1: Baseline T2: 1–4.5 years Mean 3.0 years		A lower sense of helplessness (higher internal LOC) at T1 was associated with lower risk for depression at T2		Multiple logistic regression analysis Adjusted for age, gender, race, household income, depressive score at baseline, IADL, Physical illness, use of mental health resources during follow-up
T1: Baseline T2: 2 years	The cognitive coping strategy high acceptance and positive reappraisal at T2 were associated with less depressive symptoms at T2		Self-blame, positive refocusing, refocus on planning, putting into perspective or other-blame were not correlated with depression scores In adjusted analysis, rumination and being catastrophic were not associated with depressive symptoms	Pearson's correlation and Multivariate regression analysis Adjusted for depressive symptoms at baseline, earlier and recent life events, and the coping strategies rumination and being catastrophic at follow-up
T1: Baseline T2: 2 years (n = 213)	High feeling of mastery at T1 was associated with lower levels of depressive symptoms and mediated the importance of low cognition and ADL for high level of depressive symptoms	Elderly with depression at 2-year follow-up had lower levels of mastery at T1, compared with elderly without depression		Path analysis One-way ANOVA
T1: few weeks before intervention T2: 2 weeks after intervention			LOC did not moderate the effect of control-enhancing intervention on depression	Three-way ANOVA
T1: Baseline T2: 2 years	A low externally oriented expectancy of control was associated with lower depressive score	Drivers had both lower depressive score and external expectancy of control, than ceased drivers both at T1 and at T2 A high external perceived control mediated the association between driving status and depressive symptoms		Multiple regression analysis 2-group comparison Multilevel general linear models Adjusted for age, gender, education, marital status, alone, income and health

Table 2 (continued)

Ref. No. (country)	Aim of study ¹	Sample characteristics	Instruments used to assess depression	Category ² and instruments used to assess coping
25 (USA)	To study the frequency of religious coping and the relation between this behavior and depression	850 older patients from a somatic health care setting admitted to medical or neurological services at a medical center MA = 69.8 years, SD = 4.9 years, 0% females	GDS (T1–T2) Ham-D (T1)	<i>Religious coping</i> Religious coping (T1–T2)
85 (Germany)	To evaluate the predictive power and moderating effects of coping, life orientation and control on depression	272 older patients from a somatic health care setting, with bypass operation MA = 61.2 years, SD = 8.6 years, 15% females	POMS (T1–T2)	<i>Coping strategies, control orientation</i> CCQ (T1–T2) HLC (T1) Generalized self-efficacy beliefs (T1–T2) LOT (T1–T2)
57 (USA)	To examine the relation between suppression of unpleasant thoughts and the outcome of treatment	34 older patients from a psychogeriatric setting with depression MA = 66 years, 0% females	DSM-III-R BDI (T1–T3)	<i>Coping strategies</i> WBSI (T1–T3)
<i>Studies of 6 or less quality criteria</i>				
91 (USA)	To study the relation between depressive symptoms and coping	396 older patients from a somatic health care setting, with cardiac illness, 325 with chronic illness MA = 61.8 years, SD = 3.2 years, 23.7% females 75 with acute illness MA = 61.1 years, SD = 2.9 years, 26.8% females	RDC (T1–T2)	<i>Coping strategies</i> CRI (T2)
92 (UK)	To study factors associated with degree of depression	123 older patients from a somatic health care setting, with poststroke depression MA = 66 years, SD = 13.6 years, 48.8% females	BDI (T1–T3) WDI (T1–T3)	<i>Control orientation</i> RLOC (T2–T3)
93 (USA)	To study the effect of giving older persons in an institution partial control over the activities program	64 older patients from a somatic health care setting, in a medical convalescent hospital MA = 73.1 years	Rated by staff members (T1–T2)	<i>Control orientation</i> LOC (T1–T2)
96 (Canada)	To evaluate whether osteoarthritis pain determines depressed mood	834 older community residents with hip/ knee osteoarthritis MA = 75.4 years, range 56.7–96 years, 78, 5% females	CES-D (T1+T2+T3)	<i>Coping strategies</i> Behavioral Coping scale (T1) Pain Catastrophizing scale (T1)
40 (UK)	To study risk factors and change in these in relation to persistent depression	1,164 older patients from a somatic health care setting, recruited from 2 GPs ≥65 years	GDS (T1–T2)	<i>Control orientation</i> HLC (T1)
111 (Sweden)	To assess the role of LOC in improving mood	30 older community residents from a senior citizen apartment building MA = 77.6 years, 66.7% females	Mood scale (T1+T3)	<i>Control orientation</i> LOC (T1)

Time of assessment	Findings at baseline	Findings at follow-up	Findings of no relation	Comments on method
T1: Baseline T2: within 21 months (mean 6 months) (n = 256)	Higher score of religious coping was associated with lower depressive score	Higher score of religious coping at T1 was associated with lower depressive score at T2	Religious coping index score at T1 was not associated with depression score at T2 No relation was found between change in religious coping index and depressive symptoms	Linear regression analysis Adjusted for functional status and religious affiliation Pearson's correlation Linear regression analysis Adjusted for depression at T1 and medical diagnosis
T1: 1 week after surgery T2: 6 months	Higher coping competence and higher score on Life orientation test were independently associated with lower depressive score	Higher belief in powerful others at T1 was associated with lower depressive score at T2 High coping competence had a moderating effect on the association between high depressive score and a high level of stress		Hierarchical regression analysis Adjusted for health LOC variables
T1: pretreatment T2: 28 weeks post-treatment T3: 6 months post-treatment		Patients with lower thought suppression of unpleasant thoughts at T1 had lower depressive symptoms than patients with high suppression at T3	Level of thought suppression at T1 was not associated with the depressive score at T2	Multivariate tests Adjusted for depression score at baseline and age at onset of depression
T1: Baseline T2: 1 year		More approach coping (versus avoidance coping) at T1 was significantly associated with lower depressive symptom score at T2		LISREL test Adjusted for social support and depression score at T1
T1: 1 month poststroke T2: 3 months T3: 6 months (n = 112)		Higher Recovery LOC score at T2 was associated with reduced risk for depression at T3		Multiple logistic regression analyses Adjusted for acquired language disorder
T1: Before treatment T2: 60 days after intervention		The LOC scores indicated higher internal LOC after intervention	The depression score was not changed after intervention	Paired t test between pre- and post-test
T1 = baseline T2 = 12 months T3 = 24 months	Higher use of coping behaviors was associated with lower depressive symptoms		Pain catastrophizing was not associated with depressed mood	Correlation and path analysis
T1: Baseline T2: 2 years		Having medium high or high belief in powerful others at T1 reduced the odds for persistence of depression at T2		Logistic regression analyses Adjusted for age, gender, baseline depression, and general health, dissatisfaction with support and loneliness at follow-up
T1: Before treatment T2: 3 months T3: 6 months after social activation intervention		Lower level of internal control at T1 was associated with improvement of mood at T3		Multiple linear regression analysis Adjusting for marital status, social activity, neurotic personality traits

¹ Aim of the published studies was in relation to the purpose of this review study. ² The 4 main categories of coping: coping strategies (also including style and actions), control orientation, sense of coherence and religious coping.

Table 3. Cross-sectional studies (n = 51)

Ref. No. (country)	Aim of the study ¹	Sample characteristics	Category ² and instruments used to assess depres- sion
<i>Studies of 6 and more quality criteria</i>			
65 (Netherlands)	To examine the joint effects of stress and coping resources in predicting depressive symptoms	194 older community residents randomly selected from metropolitan area MA = 76.5 years, SD = 7.25 years, 52% females	GDS
49 (USA)	To examine the relation between coping styles and depressive symptoms	80 older patients from a somatic health care setting with heart failure and depressive symptoms MA = 69 years, 52% females	DSM-IV GDS
58 (USA)	To determine the relation between religious practices and physical, social, and cognitive variables known to influence the prognosis of depression in the elderly	86 older patients from a psychogeriatric clinical setting with major depression MA = 76.6 years, SD = 7.4 years, 70.9% females	DSM-IV GDS
59 (Israel)	To examine the association between cognitive problem solving and SOC with IADL function and depression	31 older patients from a psychogeriatric clinical setting with depression MA = 73 years, SD = 9.3 30 older community residents without depression MA = 78 years, SD = 5.8	DSM-IV GDS-15
62 (Norway)	To analyze the relationships between depressive symptoms, SOC and emotional and social loneliness	227 older patients from a nursing home setting MA = 85.4 years, range 65–102 years, 72% females	GDS
68 (USA)	To study the effect of stressful life events on depressive symptoms in elderly with extreme internal LOC compared to those with moderate levels of internal LOC	351 older community residents including senior citizen housing, metropolitan area, from random survey MA = 73.4 years, SD = 6.2 years, 66% females	CES-D
69 (Poland)	To determine the connection between the SOC level and sociodemographic factors	257 older community residents being students of the U3A ¹ MA = 64.54 years, 2% females	GDS-15
74 (USA)	To examine whether religious coping is inversely related to all depressive symptoms or only to certain symptoms	832 older patients from a somatic health care setting with medical and neurological disorders MA = 70 years, 0% females	Ham-D SADS GDS
75 (Hong Kong)	To examine the impact of stressful life events on change in depressive symptoms	411 older community residents, randomly selected from metropolitan area MA = 71.1 years, 54.3% females	CES-D
76 (USA)	To study if LOC mediate the effect of discrimination on depressive symptoms	472 older community residents and Korean American immigrants MA = 69.9 years, SD = 7.04 years, 57.9% females	CES-D
77 (New Zealand)	To examine the influence of experiential avoidance on depression and as a moderator in the relation between physical health problems and depression	195 older community residents living in their own homes or in a retirement village complex MA = 80–84 years, 71.8% females	GDS-SF
78 (USA)	To investigate the relation between self-efficacy and depression	140 older community residents with pain from chronic arthritis MA = 81.7 years, 88% females	GDS

Instruments used to assess coping	Findings of relations between depression and coping	Findings of no relations	Comments on method
<i>Coping strategies</i> Control orientation CISS Coping self-efficacy	High degree of task-oriented and less use of emotion-oriented coping strategies together with higher self-efficacy were associated with decreased level of depressive symptoms	Avoidance-oriented coping was not related to depressive symptoms	Multiple linear regression analysis adjusted for life stress
<i>Coping strategies</i> Brief COPE	Less use of the coping strategies denial and self-blame were independently associated with decreased depressive symptom level	Adaptive coping styles and self-distraction were not associated with depression scores	Multiple linear regression analysis adjusted for severity of heart failure and comorbid illness
<i>Religious coping</i> Duke University religion index	Increased religious coping was associated with increased disability in depressed elderly		Multiple linear regression analysis adjusted for level of disability, social support and number of chronic illnesses
<i>Sense of coherence</i> SOC-19	Depressive group: An interaction was found between verbal problem solving and SOC Higher functioning in problem solving and higher SOC scores was associated with lower depressive scores	Control group: No associations were found	Nonparametric statistics Wilcoxon sum rank ANCOVA
<i>Sense of coherence</i> SOC-13	SOC reduced the association between GDS and attachment	No interaction was found between GDS and SOC	Cronbach's alpha Multiple regression analyses
<i>Control orientation</i> I/E scale	High mastery control beliefs were associated with reduced depressive score Lower belief in chance was associated with reduced depressive score and the stress on depressive symptoms was lower Those with a low degree of life stress and belief in chance had relatively less depressive symptoms compared to those who did believe in chance and had high life stress		Multiple linear regression analysis adjusted for age, gender, race, education, income, response bias
<i>Sense of coherence</i> SOC-29	SOC was negatively associated with depression		Descriptive statistics Spearman and Pearson's correlation test
<i>Religious coping</i> RCI	A high religious coping was inversely related to cognitive symptoms of depression	A high religious coping was not related to somatic symptoms of depression	Cochran-Mantel-Haenszel χ^2 statistics adjusted for race, psychiatric history and health status
<i>Control orientation</i> The generalized SOC	A higher SOC was related to lower depressive scores and mediated the impact of stressful life events on depression		Multiple linear regression analysis adjusted for age, gender, marital status, years of education chronic illnesses, functional disability
<i>Control orientation</i> Mastery scale	Higher LOC was associated with lower depression symptoms LOC removed the effect of discrimination on depressive symptoms		Multiple linear regression analysis adjusted for age, gender, education, length of stay in USA
<i>Coping strategies</i> AAQ	Reduced use of experiential avoidance was associated with a lower degree of depressive symptoms Lower levels of experiential avoidance moderated more strongly the association between poorer physical health and higher depressive score		Multiple linear regression analysis adjusted for degree of impairment, self-reported health and social support
<i>Control orientation</i> Arthritis Self-Efficacy scale CPCI	Higher self-efficacy was associated with lower degree of depressive symptoms		Multiple linear regression analysis adjusted for age, gender and pain intensity

Table 3 (continued)

Ref. No. (country)	Aim of the study ¹	Sample characteristics	Category ² and instruments used to assess depres- sion
79 (USA)	To study coping of chronic obstructive airway disease in relation to depression in patients and spouses	107 older community residents and married couples, where 1 had a chronic obstructive airway disease MA = 62.4 years, SD = 10.62 years, 37.4% females Spouses: MA = 61.12 years, SD = 10.63 years, 62.6% females	CES-D
41 (Netherlands)	To explore coping actions taken to cope with depressed mood	350 older community residents living in residential homes in metropolitan area without cognitive impairment MA = 84.7 years, SD = 6.2 years, 71.7% females	DSM-IV CES-D
81 (USA)	To study if elderly with internal LOC had less depressive symptoms than elderly with external LOC	117 older community residents in a metropolitan area MA = 72.1 years, SD = 7.1 years	BDI POMS Ham-D SDS
35 (USA)	To investigate the relation between religious motivation and beliefs and religious coping, and between religious coping, depression and control beliefs	97 older patients from a nursing home setting MA = 69 years, 7.77% females	GDS GRECC
28 (Sweden)	To find out how SOC, depressive mood and social network relate to the tendency to report symptoms of illness	58 older community residents MA = 71 years, 47% females	Zung
60 (Sweden)	To identify factors associated with low SOC in elderly suicide attempters	80 older persons from a somatic health care setting after suicide attempt MA = 79.4 years, range 70–91 years, 42 females	DSM-IV
82 (Canada)	To obtain more information about the relationships of alcohol and medication use and other areas of the older person's life	826 older community residents MA = 74.8 years, range 63–96, 65% females	CES-D
83 (Finland)	To locate several meaning-in-life measures within the space of functioning	55 older community residents in 2 age cohorts from a Finnish population study 67% females	CES-D
46 (Spain)	To analyze how cognitive-behavioral and perceptual variables help to explain the presence or absence of depression	104 older patients from a somatic health care setting from hospitals and nursing homes with chronic pain from osteoarthritis MA = 74.32 years, SD = 12.6 years, 85.6% females	GDS
51 (UK)	To examine the relation between perceptions of illness and coping styles and depression	98 older patients from a somatic health care setting recruited at memory clinics with subjective memory complaints MA = 73.4 years, SD = 8.8, 64 females	GDS-15
86 (USA)	To determine the relation between religiosity, depression, and other mood states	100 older patients from a somatic health care setting with cancer MA = 73 years, 67% females	GDS POMS

Instruments used to assess coping	Findings of relations between depression and coping	Findings of no relations	Comments on method
<i>Coping strategies</i> <i>Control orientation</i> Indices of coping resources MHLOC	Patients: High degree of active, behavioral and cognitive coping and low degree of avoidance coping were associated with less depressive symptoms Spouses: Higher internal control, less avoidant coping and more active coping strategies were related to less depressive symptoms	Patients: HLOC – belief was not significantly related to depression	Multiple linear regression analysis adjusted for gender and age
<i>Coping strategies</i> 22 coping actions, adapted from the questionnaire of Jorm et al., 2004 [158]	The odds for using coping actions against depression decreased with low depression score and no lifetime major depressive disorder		Multiple logistic regression analysis adjusted for gender, age, civil status, education religious belief
<i>Control orientation</i> Levenson's Internal (I), Powerful Others (P), and Chance (C) scales	Higher internality and lower belief in powerful others were associated with lower depression score	Higher belief in chance was not associated with high or low depressive scores	Pearson's correlation One-way ANOVA
<i>Control orientation</i> <i>Religious coping</i> I/E-R scale RCI RPSS HLOC	Increased religious coping was related to increased control beliefs and higher control beliefs were associated with reduced depression score		Multiple linear regression analysis
<i>Sense of coherence</i> SOC-29	Higher SOC scores correlated with less depressive symptoms		Pearson's correlation Multivariate analyses
<i>Sense of coherence</i> SOC-29	Major depression was strongly and positively associated with SOC		Univariate and multivariate exact logistic regression adjusted for sex, age, current major depression
<i>Sense of coherence</i> SOC-13	Depression was highest, and SOC lowest for former drinkers, with no significant differences among the 4 groups		Analyses of covariance
<i>Sense of coherence</i> SOC-13	Higher SOC score was associated with lower depressive symptoms in persons who see their life as a rising line		Multidimensional scaling in a distance matrix Kruskal's stress formula Squared correlations Pearson's correlation
<i>Coping strategies</i> CSQ Vanderbilt pain management	A lower degree of complaint behavior, avoidance, catastrophizing, passive coping style, stability beliefs and mystery beliefs and higher degree of ignoring pain sensations and coping self-statements were related to absence of depression	No differences were found between those with and without symptoms of depression for active coping, self-blame, self-efficacy for controlling pain and for decreasing pain, reinterpreting pain sensations, praying and hoping, diverting attention and help-seeking	2-group comparison with t tests
<i>Coping strategies</i> <i>Control orientation</i> WCQ Personal control belief	Greater use of escape/avoidance and less use of distancing correlated with higher depression score Higher personal control was associated with lower depression score	Avoidance and distancing were not significantly associated with depression	Pearson's correlation analysis and multiple linear regression analysis adjusted for perception of illness
<i>Religious coping</i> (I/E-R) scale	High intrinsic religiosity patients had lower depression scores and better mood state than those with low intrinsic religiosity		ANCOVA

Table 3 (continued)

Ref. No. (country)	Aim of the study ¹	Sample characteristics	Category ² and instruments used to assess depres- sion
87 (Netherlands)	To study the relation between coping in terms of LOC, cognitive function and depressive symptoms	3,107 older community residents, randomly selected from 9 municipalities MA = 70.8 years, SD = 8.8 years, 51.5% females	CES-D
88 (UK)	To examine health LOC in relation to depressive symptoms	1,602 older patients from a somatic health care setting recruited from 2 GPs >65 years, 62.5% females	GDS-SF
89 (Spain)	To investigate LOC as risk factor for depressive symptoms among an elderly Spanish population	1,116 older community residents, randomly selected in a working-class city >65 years, 45.9% females	CES-D
<i>Studies of less than 6 quality criteria</i>			
90 (USA)	To study the relation between internal health LOC and depression by gender	508 older community residents MA = 72.5 years females, 71.1 years males, 58.9% females	18-item scale of depressive systems
61 (USA)	To study dispositional coping styles and distress among cognitively impaired anxious/depressed and nondepressed persons	28 older patients from a somatic health care setting with cognitive impairment in a memory clinic MA = 79.5 years, SD = 7.7 years, 82% females 42 anxious/depressed patients without cognitive impairment MA = 64.4 years, SD = 6.8 years, 64% females 25 healthy older control group participants MA = 63.7 years, SD = 7.1 years, 56% females	BSI
94 (USA)	To study whether or not the relation between external LOC orientation and depression correlate	23 older community residents without depression and 25 with depression Range 60–80 years	SDS
95 (Hong Kong)	To examine the effect of SOC in the relation between financial strain and depressive symptoms	411 older community residents, randomly selected from metropolitan area MA = 71.1 years, 54.3% females	CES-D
44 (USA)	To study coping, LOC and self-efficacy in relation to depressive symptoms	104 older patients from a somatic health care setting being veterans with heart failure MA = 71.7 years, 1% females	GDS
53 (USA)	To examine the associations between hardiness (defined as the ability to manage stress) and depression	292 older community residents in assisted-living facilities and senior centers MA = 74.0 years, SD = 8.0, range 60–101 years, 232 females	GDS
97 (USA)	To examine the relationship between acculturation, health LOC and depression	70 older community residents and immigrants from 4 local mosques MA = 63 years, SD = 10.2, 37% females	CES-D
98 (Germany)	To determine the extent to which coping and depressive symptoms, health indicators and behavioral factors contribute to self-ratings of health	1,174 older community residents MA = 73.78 years, SD = 5.21 years, 4% females	CES-D

Instruments used to assess coping	Findings of relations between depression and coping	Findings of no relations	Comments on method
<i>Control orientation</i> Mastery scale	Women, but not men, with high cognitive function and an internal control had less depressive symptoms compared to low cognitive functioning woman with an external LOC		Multiple linear regression analysis adjusted for age and education
<i>Control orientation</i> HLOC	High degree of internality and low degree of belief in chance were both associated with reduced odds for depression		Multiple logistic regression analysis adjusted for age, gender and general practice, and several health and disability variables
<i>Control orientation</i> Mastery scale	High LOC was associated with decreased risk of depression		Multiple logistic regression analysis adjusted for gender, income, chronic condition ADL and IADL impairment, social support, and social activities
<i>Control orientation</i> MHLC	Higher internal health LOC was associated with less depressive symptoms for women, but not for men		Regression analysis adjusting for age
<i>Coping strategies</i> COPE	The group of persons with cognitive impairment had less use of problem-focused and emotional-focused coping strategies than the group with anxiety and depression, and did not differ from the control group		3-group comparison with use of Anova and Bonferroni posttests
<i>Control orientation</i> I/E scale	Internal LOC correlates with less depressive symptoms		Pearson's correlation 2-group comparison
<i>Control orientation</i> SOC over finances The generalized SOC	Higher degree of generalized SOC was significantly associated with lower depressive symptoms When level of generalized SOC became higher, the impact of financial strain on depressive symptoms was lower	SOC over finances was not associated with depressive symptoms	Multiple linear regression analysis adjusted for age, gender, marital status, years of education and financial strain
<i>Control orientation</i> <i>Coping strategies</i> MHLC Brief-COPE	Higher self-efficacy, less attributed LOC to chance and less maladaptive coping responses were related to less depression Attributing LOC to chance independently predicted depressive symptoms	Depressed did not significantly differ from nondepressed in terms of adaptive coping, religious/substance coping and internal LOC	2-group comparison Multiple linear regression analysis adjusted for physical limitation, heart failure intrusiveness, maladaptive coping and self-efficacy
<i>Coping strategies</i> Dispositional Resilience scale II	Hardiness and depression correlated		Pearson's correlation
<i>Control orientation</i> MHLC	High belief in internal health LOC correlated with and was associated with low depression score	A belief in external and chance health LOC were not correlated with depression score	Pearson's product/moment correlation Multiple linear regression analysis adjusted for cognitive status, heritage culture and physical health
<i>Coping strategies</i> Goal adjustment scale	Low score on negative affect and high score on positive affect correlated with lower degree of depressive symptoms		Logistic regression analysis Structural equation modeling Correlation analysis (not told whether it was nonparametric or parametric)

Table 3 (continued)

Ref. No. (country)	Aim of the study ¹	Sample characteristics	Category ² and instruments used to assess depres- sion
99 (Sweden)	To investigate the correlations between measures of dispositional optimism and depression	68 older patients from a somatic health care setting with hearing impairments from register at local hearing center MA = 69.6 years, SD = 2.5 years, 44.1% females	BDI
36 (USA)	To examine spiritual well-being and practice of patients in relation to depression	24 older patients from a somatic health care setting with a primary diagnosis of severe heart failure MA = 76.2 years, SD = 9.29 years, 10% females	CES-D
42 (USA)	To examine the potential relations between spirituality and depression	40 older community residents living alone with need of home service MA = 76.2 years, 72.5% females	GDS-SF
100 (USA)	To examine the influence of lifetime-accumulated trauma on mental health	1,216 older community residents MA = 74.2 years, 67% females	GDS-SF
101 (Poland)	To investigate religious activity, depression and coping in older age	34 older patients from a somatic health care setting with a catholic belief Range 59–86 years, 26 females	CES-D
43 (China)	To evaluate the impact of coping and other factors on depression in empty-nest elderly	415 older community residents, empty nest and nonempty nest from rural area MA = 70.1 years, SD = 7.53 years, 50.6% females	GDS
102 (USA)	To examine the association between depressive symptoms and health (physically, functionally and mentally)	2,823 older community residents, randomly selected immigrants from Mexico to USA MA = 72.6 years, 57% females	CES-D
103 (UK)	To examine the relationship between illness perceptions, adaptive coping and depression	301 older patients from a nursing home setting, recruited from palliative care service MA = 68.5 years, 49% females	Primary Care Evaluation of Mental Disorders (PRIME-MD)
104 (Netherlands)	To study how different coping styles and LOC are related to depressive symptoms	78 older patients from a somatic health care setting with cancer ≥70 years	CES-D
105 (USA)	To evaluate whether elderly with depression use different coping strategies than elderly without depression and if these strategies were perceived to be helpful regarding a negative life event	32 older patients from a psychogeriatric clinical setting with major depression MA = 71.9 years, SD = 4.73 years, 81.25% females 32 older community residents from local senior service centers as control group MA = 73.2 years, SD = 6.29 years, 81.25% females	BDI
48 (USA)	To study if behavioral and approach coping strategies would be associated with less depressive symptoms	80 older patients from a somatic health care setting with Parkinson's disease MA = 61.7 years, 31.3% females	BDI
106 (Canada)	To examine the use of proactive coping in relation to depression	224 older community residents in day program at community centers MA = 75 years, SD = 6.88 years, 78.2% females	BSI

Instruments used to assess coping	Findings of relations between depression and coping	Findings of no relations	Comments on method
<i>Control orientation</i> LOT HCA	A high degree of optimism (Life Orientation test) correlated with a low depression score		Cronbach's alpha Pearson's correlation One-way ANOVA
<i>Control orientation</i> <i>Religious coping</i> SIWB (self-efficacy + life scheme subscales) SPC	A higher self-efficacy correlated strongly with a decrease in depressive symptoms As spiritual well-being increased, depression decreased		Pearson's correlation
<i>Religious coping</i> DSES	Higher religious coping correlated moderately with lower depression score Religiosity tended to be associated with reduced depressive symptom scores		Pearson's correlation Multiple linear regression analysis adjusted for age, gender, race, income, home service support, loneliness
<i>Coping strategies</i> PTSD checklist	Reduced avoidance behavior is associated with reduced depressive score and acts as a moderator of the association between higher accumulated trauma and increased depressive score		Multiple linear regression analysis adjusted for age, gender and civil status
<i>Coping strategies</i> CISS	Use of more emotion- and avoidance-oriented strategies and less adaptive coping (i.e. task-oriented) dominated in those with depression compared to those without depression		Univariate linear regression analysis was performed concerning religious activity, but not the CISS χ^2 analysis
<i>Coping strategies</i> SCSQ	Having a low negative coping style was independently associated with reduced depressive score	Positive coping style was not associated with depressive score	Multiple linear regression analysis adjusted for support, marital status and economic status
<i>Control orientation</i> HLOC	Higher experienced control over health reduced the risk for depression in women, but not in men		Multiple logistic regression analysis adjusted for education, insurance coverage, low assimilation
<i>Coping strategies</i> Revised Coping questionnaire based on mental adjustment to cancer scale (MAC)	Higher helplessness/hopelessness, and anxiety and lower fighting spirit were correlated with higher depression score	Fatalism was not correlated with depressive symptoms	Spearman's rank correlation Logistic regression analysis
<i>Control orientation</i> <i>Coping strategies</i> CLOC UCL	Low avoidance coping correlated with low depressive scores	Other coping styles and CLOC orientations were not related to depressive symptoms	Cross-sectional correlations both at baseline and follow-up
<i>Coping strategies</i> HDLQ	Nondepressed elderly used emotional discharge strategies, logical analysis, information seeking, problem solving and affective regulation less often than the depressed All coping strategies were more efficient in dealing with a stressor among the nondepressed	Nondepressed did not differ significantly from depressed elders regarding frequency of use of logical analysis, information seeking, problem-solving, or affective regulation	2-group comparison
<i>Coping strategies</i> CRI	Higher degree of behavioral coping strategies and lower degree of cognitive coping strategies were independently associated with lower levels of depressive symptoms	Cognitive, approach and avoidance coping were not associated with depressive score	Hierarchical linear regression analysis
<i>Coping strategies</i> PCI	High degree of proactive coping is related to lower depressive symptoms		Path analysis

Table 3 (continued)

Ref. No. (country)	Aim of the study ¹	Sample characteristics	Category ² and instruments used to assess depres- sion
107 (Canada)	To examine the importance of coping responses in relation to depressive symptoms	45 older patients from a somatic health care setting with Parkinson's disease MA = 67.4 years, 51.1% females 24 older patients with comparable disabilities as control group MA = 65.4 years, 58% females	BDI
108 (USA)	To examine if coping has main effects on the level of occurrence of depressive symptoms	96 older community residents from metropolitan areas MA = 74.4 years, SD = 6.28 years, 69.7% females	Health and Daily Living Form
109 (USA)	To identify if group-specific differences of coping exist	4,017 older community residents at risk of hospitalization ≥65 years, 100% females	Self-reported depressive symptoms
110 (Netherlands)	To study risk factors of comorbid depression	216 older community residents, randomly selected elderly with type 2 diabetes mellitus Range 55–85 years, 53% females	CES-D
112 (Canada)	To study the correlation between desired control and depressive score	Study 1: 88 older community residents MA = 75 years, 75% females Study 2: 77 older patients from a nursing home setting being armed forces veterans in chronic care hospital ward MA = 72 years, 0% females	Depressive variables adapted from Jackson and Messick's Differential Personality Inventory Chiriboga's Positive/Negative Mood Measure

depressive symptoms in depressed persons but not in the control group [59], and another study found SOC to mediate the association between depressive symptoms and attachment [62] (tables 2, 3).

Control Orientation

Among the total of 36 studies related to the concept of control orientation, 22 were of higher quality (10 longitudinal and 12 cross-sectional; table 1). In studies of higher quality, the samples were recruited from the community in 13 studies. Of the 9 studies from the clinical settings, 3 included participants with different cardiac disorders, 2 included participants suffering from depression, 2 had participants from nursing homes, 1 study had participants with cognitive decline and 1 study included participants with somatic disorders in general (GP; tables 2, 3). Among the 10 longitudinal studies of higher quality, a high 'internally oriented recovery LOC' or 'desired LOC' (perceived control in a situation), self-efficacy, optimism, mastery and a low externally oriented LOC at baseline were all associated with fewer depressive symptoms and/or less persistent depression at follow-up (table 2). Of the

Instruments used to assess coping	Findings of relations between depression and coping	Findings of no relations	Comments on method
<i>Coping strategies</i> Billings and Moos Coping questionnaire	Patients: Higher use of active cognitive coping strategies correlated with less depressive symptoms Controls: Higher active behavioral coping correlated with less depressive symptoms Patients had higher depressive score than controls and used active (cognitive and behavioral) coping strategies less often	Avoidance coping was not related to depression scores in either of the 2 groups	2-group comparison with t tests Pearson's correlation
<i>Coping strategies</i> COPE	Active coping and reduced ventilation were independently associated with reduced depressive symptoms	Avoidant coping and cognitive coping were not independently related to depressive symptoms	Multiple linear regression analysis adjusted for negative mood and hassles occurrence
<i>Control orientation</i> Coping resources	Higher SOC in life was associated with decreased depressive score in all ethnic groups of elderly		Multiple linear regression analysis adjusted for age, income, living alone, ADL and IADL impairment, medical illness, involuntary relocation and social network
<i>Control orientation</i> Mastery scale	Having a higher internal LOC (mastery) was associated with less depressive symptoms		Multiple linear regression analysis adjusted for age, civil status, education clinical characteristics, functional limitations and support received
<i>Control orientation</i> The Desired Control questionnaire	Study 1: Higher desired control correlates with lower depressive score Study 2: Desired control significantly correlated with frequency of positive mood	Study 2: Desired control was not significantly correlated with negative mood	Correlation Cronbach's alpha

¹ Aim of the published studies was in relation to the purpose of this review study.

² The 4 main categories of coping: coping strategies (also including style and actions), control orientation, sense of coherence and religious coping.

12 cross-sectional studies of higher quality, a high internal LOC, self-efficacy and low externally oriented control was found to be associated with less depressive symptoms (table 3). Two longitudinal studies report some results of no association, i.e. 1 study including LOC and self-efficacy [63] and another including optimism [64] at baseline did not find these concepts of control orientation associated with reduced depressive symptoms after treatment (table 2). Furthermore, 2 cross-sectional studies focusing on 'belief of chance' as control orientation did not find associations with degree of depressive score (table 3).

Coping Strategies

Of the total of 37 studies concerning coping strategies in relation to depression, 14 were of higher quality (7 longitudinal and 7 cross-sectional; table 1). Nine studies had recruited older persons from clinical settings and 5 of the studies were community based. From clinical settings, 4 studies included participants with different cardiac disorders, 3 included depressed participants, 1 included participants suffering from pain, and 1 study included cognitively impaired older persons (tables 2, 3). Of the 7 longitudinal studies of higher quality, an

Table 4. Various instruments used in screening depressive symptoms

Measurement	Number of studies
CES-D (31)	24 (36, 41, 67, 68, 70, 72, 73, 75, 76, 79, 80, 82, 83, 87, 89, 95–98, 101, 102, 104, 109, 110)
GDS (115, 116)	23 (25, 35, 40, 42–44, 46, 52, 53, 58, 59, 62, 65, 66, 69, 74, 77, 78, 84, 86, 88, 100, 114)
BDI (117)	8 (48, 55, 57, 71, 81, 92, 99, 105, 107)
Ham-D (118)	6 (25, 28, 50, 55, 66, 74, 81)
SDS (119)	4 (81, 94)
POMS (120)	3 (81, 85, 86)
BSI (121)	2 (61, 106)
The depressive symptoms measure (122)	2 (91, 108)
MADRS (123)	2 (26, 56)
HADS (124)	2 (45, 131)
SDS (125)	1 (90)
GRECC (126)	1 (35)
RDC (127)	1 (91)
WDI (128)	1 (92)
SADS (129)	1 (74)
'Depression' (112)	1 (112)
Chiriboga's Positive/Negative Mood measure (112)	1 (112)
Mood scale (111)	1 (111)
'Staff rating of depression' (93)	1 (93)
'Self-reported depressive symptoms' (41)	1 (109)
PRIME-MD (130)	1 (103)

Assessments of depression: GDS = Geriatric Depression Scale; GDS-SF = Geriatric Depression Scale-Short form; POMS = The Profile of Mood States; GRECC = The Durham Depression Scale; SADS = Schedule for Affective Disorder and Schizophrenia; CES-D = The Center for Epidemiologic Studies of Depression Scale; BSI = Brief Symptom Inventory; BDI = Beck Depression Inventory; SDS = Self-Rating Depression Scale; Ham-D = Hamilton Rating Scale for Depression.

Self-rated scales: GDS, CES-D, SDS (Zung), GRECC, BDI, POMS, 'Self-reported depressive symptoms', Chiriboga's Positive/Negative Mood Scale, 'Depression': Messick's Differential Personality Inventory, Mood Scale, WDI, HADS, SDS, BSI, PRIME-MD. Observer-rated scales: HRSD/Ham-D, 'Staff rating of frequency of patient depression', SADS. Structural interviews: MADRS, The depressive symptoms measure, RDC.

increased use of adaptive- and approach-oriented coping strategies (as opposed to avoidance), acceptance, finding meaning, appraisal, positive reappraisal, and low avoidance coping at baseline were associated with less depression at follow-up. Both the longitudinal and cross-sectional studies reported low levels of avoidance coping associated with lower levels of depressive symptoms. In addition, the 7 cross-sectional studies of higher quality reported low levels of passive coping and emotion-oriented coping (avoidance), denial, self-blame, complaint behavior, catastrophizing, and mystery beliefs to be associated with lower levels of depressive symptoms. Also, findings of high levels of problem- and task-oriented, active, cognitive and behavioral coping, ignoring pain, and coping self-statements were all associated with lower levels and absence of depressive symptoms. Three cross-sectional and 5 longitudinal studies reported of some additional aspects of strategies (i.e. avoidance, blaming, refocusing, praying, help seeking, appraisal and thought suppression) not being associated with symptoms of depression, or of symptoms of depression at follow-up (tables 2, 3).

Table 5. Various instruments used in assessing coping

Measurements	Number of studies
<i>Sense of coherence</i>	<i>Sense of coherence</i>
SOC (37)	9 (28, 45, 56, 59, 60, 62, 69, 82, 83)
<i>Control</i>	<i>Control</i>
Mastery (39)	6 (72, 73, 76, 87, 89, 110)
I/E Control of Reinforcement Scale (15)	6 (52, 68, 86, 93, 94, 113)
MHLC (38, 132)	6 (35, 44, 66, 79, 90, 97)
LOT (133)	3 (70, 85, 99)
RLOC (134)	2 (47, 92)
Coping Self-Efficacy Scale (135)	2 (65, 66)
MHLC (136)	1 (81)
The desired control questionnaire (137)	1 (112)
Desired Control Measure (138)	1 (80)
Sense of control over finances (18)	1 (95)
CLOCM (139)	1 (104)
HLOC (140)	1 (85)
LOC(141)	1 (111)
A structured measure of self-efficacy (142)	1 (75)
GSE (143, 144)	1 (85)
IPQ-M (51)	1 (51)
The Optimization in Primary and Secondary Control survey (145)	1 (50)
<i>Coping strategies</i>	<i>Coping strategies</i>
COPE (146, 147)	4 (44, 49, 61, 108)
WOC (21)	3 (70, 71, 84)
CRI (148)	2 (48, 91)
CISS (149)	2 (101, 114)
CSQ (150)	1 (55)
The Billings and Moos coping questionnaire (151)	1 (107)
Indices of coping resources (152)	1 (79)
HDLQ (122)	1 (105)
CSQ (153)	1 (46)
AAQ (22)	1 (77)
PCI (154)	1 (106)
SCSQ (23)	1 (43)
UCL (155)	1 (104)
CCQ (156)	1 (85)
CERQ (157)	1 (114)
Actions to cope (158)	1 (41)
PTSD checklist (159)	1 (100)
Coping resources (109)	1 (109)
WBSI (160)	1 (57)
SAM (161)	1 (71)
HCA (162)	1 (99)
Arthritis Self-Efficacy Scale (163, 164)	1 (78)
CPCI (165)	1 (78)
Pain Catastrophizing Scale (166)	1 (96)
Vanderbilt Pain Management Inventory (167)	1 (46)
Exercise coping measures (47)	1 (47)
Revised coping questionnaire (no reference)	1 (103)
Dispositional Resilience Scale II (168)	1 (53)
Goal adjustment scale (169)	1 (98)
Behavioral Coping Scale (170)	1 (96)

Table 5 (continued)

Measurements	Number of studies
<i>Religious coping</i>	<i>Religious coping</i>
RCI (25, 171)	5 (25, 26, 35, 58, 74)
Intrinsic/Extrinsic Religiosity (I/E-R) Scale (172)	2 (35, 86)
Brief RCOPE (173)	1 (26)
RPSS (34)	1 (35)
TSPC (174)	1 (36)
SIWB (175)	1 (36)
DSES (176)	1 (42)

Assessment of coping: SCSQ = The Simplified Coping Style Questionnaire; DSES = The Daily Spiritual Experiences Scale; I/E-R Scale = Intrinsic/Extrinsic Religiosity Scale; HLOC = Internal Health Locus of Control Scale; RPSS = Religious Problem-Solving Scales; RLOC = Recovery Locus of Control; RCI = Religious Coping Index; CSQ = Coping Strategies Questionnaires; AAQ = Acceptance and Action Questionnaire; PCI = The Proactive Coping Inventory; CRI = Coping Response Inventory; COPE = Coping Orientation to Problems Experienced Scale; CISS = Coping Inventory for Stressful Situations; MHLOC = Multidimensional Health Locus of Control Scale; HDLQ = Health and Daily Living Questionnaire; SPC = The Spiritual Practices Checklist; SIWB = The Spirituality Index of Well-Being; CPCI = The Chronic Pain Coping Inventory; HCA = Hearing Coping Assessment; LOT = Life Orientation Test; I/E Scale = The Rotter Internal and External Locus of Control Scale.

Religious Coping

From the total of 12 studies applying an instrument of religious coping, 6 were of higher quality (2 longitudinal and 4 cross-sectional; table 1) and all were recruiting older persons from clinical settings with participants suffering from depression (2 studies), somatic disorders, not specified (3 studies), and cancer (1 study; tables 2, 3). Among the longitudinal studies, high levels of positive religious coping and low levels of negative religious coping at baseline were related to lower levels of depressive symptoms at follow-up. Corresponding to the longitudinal studies, the cross-sectional studies found increased use of positive religious coping associated with lower levels of depressive symptoms. High levels of intrinsic religiosity were found to be important for a low depression score only in the cross-sectional studies. In 2 studies of higher quality (1 longitudinal and 1 cross-sectional), some additional aspects of religious coping (public and private religious practice, negative religious coping and religious coping index) were studied and shown not to be associated with depressive symptoms (tables 2, 3).

Discussion

The discussion of the relation between coping and depression in older persons is based on the findings reported in the studies of higher quality. Although coping was defined in many ways throughout the studies, they formed four clusters of concepts, i.e. sense of coherence, control orientation, coping strategies, and religious coping. All high-quality studies reported findings of a relationship in which more adaptive coping (higher SOC, internal control orientation, active strategies, and use of more religious or positive coping) were associated with less depressive symptoms (tables 2, 3).

SOC may be viewed as a personal coping resource [32]. We found a positive relation between higher SOC and a lower degree of depressive symptoms in samples of older persons,

which is in line with the findings from a systematic review on mixed age groups [29]. The finding that a stronger SOC is associated with fewer symptoms of depression indicates that the SOC may be a health-promoting factor, as proposed in the theory of salutogenesis, and that SOC as a coping resource contributes to the management of stress and promotes effective coping in older people [27].

Control orientation may be seen as another personal coping resource [32]. In this review of cross-sectional and longitudinal studies of higher quality, a strong and consistent relationship between higher internal control orientation and reduced levels of depressive symptoms were found in community-based populations among older persons with somatic disorders, and in older persons suffering from major depression or being dependent on care. This relation suggests that a high internal personal control orientation acts to prevent feelings of helplessness and depression, and may protect against these perceptions in times of stress and hardship, as opposed to older persons having a low internal control orientation. This finding is in accordance with other research among mixed age groups [10, 29] and older people [7, 65]. Conclusively, the ability of an older person to retain good coping resources in terms of a strong SOC and high internal control seems important for mental health and in the understanding of depression in late life.

Regarding the association between coping strategies and depression, the majority of the high-quality studies, both cross-sectional and longitudinal, reported that emotion-oriented (avoidance) coping was positively related to more depressive symptoms and that more frequent use of problem-oriented (active strategies) coping was related to less depressive symptoms. The studies regarding coping strategies are community based or have recruited samples from clinical settings, and the results considering these samples indicate that active and problem-focused strategies may act as adaptive coping strategies in times of stress and protect against symptoms of depression. Studies including older persons suffering from major depression, cognitive decline, or dependence on care are scarce, but the results are in line with those from the community-based and clinical settings, including older persons suffering from somatic disorders. However, we found a great variability in the use of different instruments of coping strategies in all the samples. Many of these instruments were not well established or validated in this age group and it is difficult to compare the results with other studies (table 5).

Considering the associations between religious coping and depression, the main finding is of a significant relationship. Higher use of religious coping, in terms of more religious activities and religiosity as available coping resources, is associated with lower levels of depressive symptoms in the majority of the studies of high quality among both the cross-sectional and longitudinal studies. The studies examining religious coping and depression were mainly recruiting their samples from clinical settings. Religious practice is defined as the nature and time spent on religious activities, and could be understood in terms of coping strategies [26], while religious coping is a more broadly defined concept ‘designed to assist people in the search for a variety of significant ends in stressful times: a sense of meaning and purpose, emotional comfort, personal control, intimacy with others, physical health, or spirituality’ [33], with the latter definition expressing concepts more in line with resources of coping. Older persons suffering from somatic disorders and major depression may find meaning, emotional comfort and control in religious beliefs and activities, and religious coping could be a protective factor against depression in late life. The studies reviewed support this notion. Stronger and more personal religious beliefs were associated with lower depressive symptoms both at baseline and after a period of time. However, the number of studies is small and, further, the different concepts of religious coping might capture different phenomena (coping resources and coping strategies, respectively).

Strengths and Limitations of This Review

It is a strength that we conducted a broad and thorough literature search, and that two researchers independently evaluated all the papers. We included all the coping perspectives used to study the relationship between coping and depression in this age group, in addition to evaluating all the papers according to quality criteria. The multitude of different concepts of coping, definitions and measures reported in the studies is an obvious limitation and may cause validity and reliability problems (table 5). We agree with other researchers who state that the variety of instruments for measuring coping and definitions of the concepts of coping make it difficult to compare the results of the studies and to draw firm conclusions, and we support the need for a further systematization of the theory and methodology of the coping field [63]. Few studies of older persons suffering from major depression and cognitive decline were found, and this also makes it difficult to conclude regarding coping and depression in these categories of elderly persons. Most of the studies including older persons suffering from major depression and cognitive decline have further excluded participants with more than a mild cognitive decline, so the included participants are not representative of the entire groups. This review is also limited because a meta-analytic approach in evaluating the studies statistically had to be omitted due to the variability in measures and designs. Also, because of the exclusion of articles written in languages other than English, the pool of research on this topic may have been limited. Consequently, the findings of this review must be interpreted cautiously.

Implications for Clinical Practice

The findings of this review imply that the instruments for measuring coping strategies and resources among older persons should be further theoretically and methodologically developed to reduce validity and reliability challenges. Despite the multitude of instruments of coping and the different settings where the studies took place, the results are quite unambiguous and show a significant relation between strategies and resources of coping and depressive symptoms in older persons, and the results are stable over time. There is also a need for validation and research on the instruments used for assessing strategies and resources of coping in samples of older persons with cognitive decline, including those who suffer from disorders like dementia and major depression. Instruments to assess resources and strategies of coping can be used to identify those at risk of developing a late-onset depressive disorder, a chronic course of recurrent depression, or worsening of depressive symptoms.

Conclusion

Our review of longitudinal and cross-sectional studies suggests a strong relationship between resources and strategies of coping and depressive symptoms in older persons from clinical and community settings. Higher SOC and internal control orientation and more use of active coping strategies and positive religious coping were related to lower levels of depressive symptoms. This finding supports the results from other reviews reporting a significant relation between concepts of coping and depressive symptoms. However, the huge variety of instruments measuring coping supports the need for a further systematization of the theory and the instruments of coping. In addition, further development of the instruments and research on coping in both populations of older persons suffering from major depression and cognitive decline is required.

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