

STUDIES AND RESEARCHES

The moderators of the relationship between burden and psychological distress among caregivers: depression symptoms and coping strategies

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Abstract

The aim of the present study is to analyze the moderating effect of depression symptoms and coping strategies in the relationship between perceived burden and mental health, among caregivers. A cross-sectional survey research was used. Fifty-two caregivers aged between 21 and 63 (99% women) filled out the paper-and-pencil questionnaires. Hierarchical multiple regression analysis showed that the depressive symptoms moderate the relationship between burden and psychological distress. Problem – focused coping was negatively associated with caregiver burden while emotion-focused coping was positively associated with caregiver burden. Still, the results showed that coping strategies are not moderators in the relationship between burden and psychological distress. These findings have practical implications in the adult training area.

Keywords

psychological distress, perceived burden, depression symptoms, coping strategies, caregivers

Rezumat

Scopul studiului este testarea simptomelor depresive și a strategiilor de coping ca moderatori ai relației stresul, în cazul îngrijitorilor de bătrâni la domiciliu, și sănătatea lor mentală. Design-ul studiului este unul de tip corelațional. Au completat chestionarele 52 de îngrijitori, cu vârste cuprinse între 21 și 63 de ani (99% femei). Conform analizei regresiei ierarhice, simptomele depresive moderează relația dintre stresul îngrijitorului și sănătatea sa mentală. Coping-ul centrat pe problemă corelează negativ cu stresul îngrijitorului, iar coping-ul centrat pe emoție corelează pozitiv cu acesta. Rezultatele au relevat însă că strategiile de coping nu sunt moderatori în relația dintre stresul perceput de îngrijitori și sănătatea lor mentală. Rezultate au valoare aplicativă în aria formării adulților.

Cuvinte cheie

sănătate mentală, stres, simptome depresive, strategii de coping, îngrijitori de bătrâni

Résumé

Le but de la présente étude est d'analyser le rôle de la modulation des symptômes de dépression et des stratégies d'adaptation dans la relation entre la charge perçue et la santé mentale, chez les soignants. Une enquête transversale a été utilisée. 52 soignants âgés de 21 et 63 (99% femmes) ont complété. L'analyse de régression multiple hiérarchique a montré que les symptômes dépressifs modèrent la relation entre la charge et la détresse psychologique. Problème - adaptation centre était associé négativement au fardeau de l'aidant tandis que l'émotion: adaptation centre était positivement associée à la charge des soignants. Les résultats ont montré que les stratégies d'adaptation ne sont pas les modérateurs de la relation entre la charge et la détresse psychologique. Ces résultats ont des implications pratiques dans le domaine de la formation des adultes.

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Mots-clés

détresse psychologique, le fardeau perçu, les symptômes de la dépression, les stratégies d'adaptation, les soignants

Introduction

It is well known that the world's population is in the process of aging and more people that are senior citizens become dependent on others, requiring in some cases full-time care for the activities of daily living. In the past years, the care of older people shifted from hospitals to community based facilities and private homes. Older people receive care in their own homes. Home care refers to supportive care provided in the patient's home by licensed healthcare professionals or by non-medical personnel like caregivers or nurse aides, who attended a training that varies in length, the minimum period being 10 weeks and the maximum being 40 weeks (Hasson & Arnetz, 2006). In comparison with the structured environment of a hospital, the homecare environment is rather unstructured. Home healthcare nurses which work in the patient's home don't benefit from colleagues and institutional supports (Ellenbecker, 2003). Caregivers provide daily care and help to ensure the activities of daily living are met. A caregiver's tasks are, for example, helping with bathing, eating, and dressing, moving, preparing the meals, and cleaning the house. Home care services help adults, usually seniors, suffering from various diseases, disabilities or simply old age that are no longer able to take care of them self, to handle the daily activities and to run a household.

Caregiving can be a highly stressful activity with negative effects on one's quality of life, leading to physical, psychological and social impairments (Yang, Hao, George, & Wang, 2012). Mental and physical health and associated factors, like burden, depressive symptoms and coping strategies among home nurses and caregivers is a well-researched area. It is well known that taking care of dependent elderly people has consequences on the caregivers health, affecting, directly and indirectly, their physical and psychological state (Di Mattei, Prunas, Novella, Marcone, Cappa, & Sarno, 2008).

Although the well being and mental health among nurses is a well researched area, little is known about these in home health care. Only a few studies addressed the issue of well being and health specifically among home caregivers (Hasson & Arnetz, 2006; Engström, Skytt, & Nilsson, 2011). In the last years there was an increased demand for home health care services which led to an emergence of many caregivers jobs on the labor market (Ellenbecker, 2003). Therefore further studies should focus on investigating the consequences of caregiving and the factors with impact on the health and well being of home caregivers.

The aim of the present study is to analyze the mental health and associated factors among caregivers. Specifically, the moderated role of depression symptoms in relationship between perceived burden and psychological distress are investigated. Also, we focused on study the moderated role of coping strategies in this relationship.

McConaghy and Caltabiano (2005) found that perceived well-being in carers is predicted by feelings of burden and Yang and co. (2012) showed that subjective caregiver burden contributed most to the variance of both physical and mental health. Making use of an active, planned and problem-focused coping style (not simply acceptance) may act as a protective factor against burden of distress among caregivers (Di Mattei & co., 2008). The present study is not only investigating the relationships between burden, coping strategies and health, but is also analyzing the role of depression in the relationship between burden and health.

Theoretical background

Previous studies have been focused on investigating either the well-being or mental health among nurses, in hospital settings (Greenglass & Burke, 1999; Chou, Hecker & Martin, 2012; Yoon & Kim, 2013); either the well-being or mental health among informal caregivers represented by spouses/ children

or other relatives of the patients (Zanetti, Frisoni, Binachetti, Tamanza, Cigoli, & Trabucchi, 1998; McConaghy & Caltabiano, 2005). Fewer studies addressed this issue exclusively among home caregivers/nursing aides (Hasson & Arnetz, 2006; Engström, Skytt, & Nilsson, 2011).

Caregiver burden and well-being

Caregiver burden can be defined as the degree to which a caregivers emotional or physical health, social life or financial status has suffered, as a result, of caring for their relative (Zarit, Toddand, & Zarit, 1986). Bell, Araki, and Neumann (2001) emphasized the psychological aspects of care are giving, like anxiety, worry, guilt, and the consequences of providing care, like fatigue, impaired social interaction, and family conflicts. The relationship between caregiver burden and well-being was extensively investigated. McConaghy and Caltabiano (2005) found that perceived well-being in carers is predicted by feelings of burden; Yang, Hao, George, and Wang (2012) showed that subjective caregiver burden contributed most to the variance of both physical and mental health. Bell and co. (2001) found a significant association between burden and carers overall health related quality of life. Thus, perceived burden is one of the most important variables in the psychological health of carers.

Coping and general health

“Coping strategies refer to the specific efforts (behavioral and psychological) that people rely on to master, tolerate, reduce or minimize stressful events” (Di Mattei & al., 2008, pp. 384). According to Lazarus and Folkman (1984), when this kind of situations arise, the individual utilize behavioral or cognitive efforts to manage the situations. Coping strategies are considered to be of two types: emotion focused coping and problem focused coping (Kneebone & Martin, 2003). Problem-focused strategies are efforts to do something vital to alleviate the stressful circumstances, whereas emotion-focused coping strategies involve efforts to regulate the emotional consequences of stressful events (Di Mattei & al., 2008). While problem-focused coping

means doing what it takes to change or directly address the stressor, emotion-focused coping is not necessarily about doing something constructive to change the stressor, it is doing something to change the way you feel, like engaging in a pleasurable activity that poses your mind and emotion to a more positive state. In their study, Di Mattei and al. (2008) investigates the relationship between caregiver’s level of distress and the coping strategies they adopt. They found that a coping style characterized by an effort to minimize, avoid or ridicule the entity and impact of stressors may predispose caregivers to higher levels of burden of distress and making use of an active, planned and problem-focused coping style (not simply acceptance) may act as a protective factor. Also, McConaghy and Caltabiano (2005) found a moderate negative correlation between practical forms of coping and burden. Chappell, Reid, and Dow (2001) suggested that in the case of caring for a person suffering from a terminal or protracted illness it may be more beneficial for caregivers to adopt an emotion- coping strategy in order to protect their own psychological state. In conclusion, problem solving style and acceptance coping style is likely to be advantageous for caregivers, as Kneebone and Martin (2003) argued.

Depression among caregivers

Another relevant factor related to elderly caregiving is the depression. Depressive symptoms among caregivers were investigated in the previous literature. In McConaghy and Caltabiano (2005) study almost 60% of caregivers (n=42) turned out to be at risk of experiencing depression. In the case of caregivers and nurses, depression symptoms are linked to well-being, surface acting (as a dimension of emotional labor), and marital status. In a study conducted by Yoon and Kim (2013) among South Korean nurses, 38% of 166 participants suffered from depressive symptoms. Surface acting was the second strongest contributor, after marital status, to an increased risk for depressive symptoms. Also, Oura, Mori, Yasuda, Miyano, Izumi, and Washio (2012) found that depressed caregivers were more likely to feel ill than non-depressed caregivers.

Emotional labor and well-being

Emotional labor is a construct that has a significant impact on one's health and well-being. Emotional labor was first defined by Hochschild (1983) as cited in Chou, Hecker and Martin, 2012, p. 502) as "the management of feeling to create a publicly observable facial and bodily display". Employees engage in emotional labor when they regulate their emotional display in an effort to meet organizationally-based expectations specific to their roles" (Brotheridge & Lee, 2003, p. 365). Caregivers have high emotional communication with the patient every day. They have to display a genuine caring behavior towards the patient, to express empathy, to show understanding and to suppress their negative feeling towards the patient through surface acting or deep acting. Surface acting and deep acting are two widely accepted dimensions of emotional labor. Deep acting refers to the management of inner feelings in order to actually feel what you are displaying (Chou, Hecker, & Martin, 2012). Deep acting was associated with a sense of personal accomplishment and identification with one's role (Brotheridge & Lee, 2003). Surface acting is the change of behavior and outward expressions, such as the facial expression, voice and gesture, without attempting to actually feel what you are displaying (Chou & al., 2012). Surface acting correlates with emotional exhaustion, depersonalization and negative affectivity (Brotheridge and Lee, 2003) and it is an important contributor to depressive symptoms (Yoon & Kim, 2013). As Brotheridge and Lee (2003) argued, the effort required to hide one's true feelings or to pretend to feel certain emotions might lead to emotional strain. On the other hand, striving to align one's feeling to the displayed emotions might reinforce identification with one's work role.

Socio-demographic characteristics of the caregivers and mental health

Previous studies have underlined that some socio-demographic characteristic of the caregiver, like, age, gender, duration of care, education and marital status are associated with their psychological health. McConaghy

and Caltabiano (2005) found a positive correlation between duration of care and well-being. It is possible that with experience, the caregivers develop a more effective way to cope with stress and gain more knowledge regarding how to manage the burdensome situations they might encounter. Still, these results are controversial, giving the fact that Yang and al. (2012) and Donaldson, Tarrier, and Burns (1998) did not found associations between these variables. Younger age was associated with caregiver's depressive symptoms (Zanetti, Frisoni, Binachetti, Tamanza, Cigoli, and Trabucchi, 1998; Yoon and Kim, 2013). In addition, Yoon and Kim (2013) also found that single nurses have higher level of depression. As described in their study, marriage affords greater emotional and social support; it offers protection from psychological distress. Regarding the gender, female caregivers were found to have a higher level of burden of distress (Gallicchio, Siddiqi, Langenberg, & Baumgarten, 2002) and a significantly lower level of mental health than the male caregivers (Yang & al., 2012). Concerning the education level, Yang and al. (2012) have found that caregivers with education level of senior middle school or above displayed a higher degree of physical and mental health. Also, the lack of competence affect's the caregiver's health and well-being. Engström, Skytt, and Nilsson (2011) found that caregivers with formal competence (training in this field) reported less workload, less stress symptoms, better sleep and better competence than did caregivers with no formal competence. In conclusion, developing the needed skills for this job might help the caregivers dealing with the job demands and maintaining their health.

Hypotheses

In order to study the relationship between the variables caregiver burden, coping strategies, emotional labor, depressive symptoms, and mental health among caregivers, the following hypotheses were formulated:

1. *The relationship between caregiver burden and psychological distress is moderated by depressive symptoms.*
2. *The relationship between caregiver burden and psychological distress is*

- moderated by emotional- focused coping.*
3. *The relationship between caregiver burden and psychological distress is moderated by problem-focused coping.*
 4. *Surface acting is positively associated with psychological distress (4a) and with depression symptoms (4b).*

Methodology

Procedure

The participants were asked to fill out a set of questionnaires. The instructions for completing the questionnaires were presented in a written form and the aim of the study was briefly explained. The sample was represented by caregivers who attended caregiving training at a specialized training agency from Timișoara, or by persons recommended by them. The agency provided a list with the contact data of its former students. Due the fact that most of them were working abroad when the study took place, many students were not reachable. Only 64 caregivers could be contacted and they either received the questionnaires by e-mail, either they met with the researcher in order to complete the tests. Twelve participants (18.4%) were excluded from the study because they did not answer all the questions. Participation in this study was voluntary, no reward or payment was received and confidentiality and anonymity was respected.

Socio-demographic characteristics of the caregivers were collected. These included age, gender, education level, marital status, competence (formal training in this field/no-formal training in this field) and duration of care (measured in months).

Participants

The participants were 52 caregivers from Romania, which work abroad as a caregiver. Most of them attended a 10 weeks training for caregivers (N = 35; 67.3%) and the other caregivers (N = 17; 32.7%) had no formal education in this field. The caregivers were aged between 21 and 63 (M = 44, SD = 8.79),

99% of the participants were female and 67% were married (nine were single, six divorced and two widows). Most of the caregivers had a medium – level education (N = 38; 73%), 8 participants had a low-level education and 6 of them attended a university. Regarding the experience in this field, the minimum length of caregiving was three months and the maximum length was 13 years (M = 31.76 months, SD = 29.60). The caregivers were working in shifts ranging from 4 to 12 weeks. While they are at the patient, where they receive accommodation, the caregivers must be 24 hours a day available for the elderly, except the 1 or 2 hours break they receive when other healthcare professional are visiting the patient.

Instruments

Self-administrated questionnaires were used in order to measure the variables studied in this paper. For each scale Cronbach Alpha coefficient was calculated using SPSS Statistics 19.00 program.

For *psychological distress* we applied General Health Questionnaire developed by Goldberg in the 1970s. GHQ is well-known instrument that measures current mental health. In the present study the short version with 12 items of GHQ was used. The scale asks whether the respondent has experienced certain symptoms or behaviors recently. An example of a positive item is: “(Have you recently) been feeling reasonably happy?” and an example of a negative item: “(Have you recently) felt you could not overcome your difficulties?” Each item ranges on a four-point scale (less than usual, no more than usual, rather more than usual or much more than usual), and six items were reversed scored. It can be scored bi- modally (0-0-1-1) or as a Likert scale (0-1-2-3). Higher scores of GHQ are an indication of psychological distress. In this study, the internal consistency coefficient was .70.

For *caregiver burden* we applied Zarit Caregiver Burden Inventory developed in 1985 by Zarit. ZBI was designed to assess burden and stress experienced by caregivers who provide care to impaired older adults. The short form of ZBI contains 12 items and

respondents are asked how often they feel this way, with scores for each item ranging from 1 (never) to 5 (nearly always) on a Likert-type scale. Examples of items are: “Do you feel that because of the time spent with the patient you do not have enough time for yourself? “or “Do you feel angry when you are around the patient?”. Total scores range from 12 to 60 with higher scores indicating greater caregiver burden. In the present research, the Cronbach Alpha coefficient was .79.

For *coping strategies*, we used two scales measuring emotion- and problem focused coping adapted by Lewin and Sager (2010) from Latack (1986). An example of item is “I give my best effort to do what is necessary to solve the problem” (problem-focused coping scale), and “I have fantasies about how things will work out” (emotion-focused coping scale). All responses were ranging from 1 (strongly disagree) to 5 (strongly agree) on a Likert-type scale. In the present study, the internal consistency coefficient for emotion-focused coping scale was very similar to Lewin’s and Sager’s result ($\alpha = .65$), and for the second scale the coefficient was .50 after deleting one item during measurement validation procedures.

For *emotional labor*, we employed the Emotional Labor Scale validated by Brotheridge and Lee (1998). The questionnaire contains 14-items measuring six facets of emotional display: frequency, intensity and variety of emotional display, the duration of interaction, and surface and deep acting. The participants were asked to think at the

interaction with their current or previous patient, during an average workday, when completing the questionnaire. Examples of items are: “I hide my true feelings about a situation” (surface acting) and “I try to actually experience the emotions that I must show” (deep acting). The responses are ranging from 1 (never) to 5 (always) on a 5 Likert type scale. Surface acting and deep acting were measured as two separate dimensions. In the present study, the Cronbach Alpha was .53 for surface acting and .72 for deep acting.

For *depression*, we used the Beck Depression Inventory (BDI) developed by Beck, Ward, Mendelson, Mock, and Erbaugh (1961) for assessing presence and severity of characteristic depression symptoms. The BDI consists of 21 items with responses ranging on a 4- Likert type scale from 0 to 3. The total score is the sum of all responses and it ranges from 0 to 63, a higher score indicating a greater degree of depression. In the present study, the Cronbach Alpha coefficient for Beck Depression Inventory was .75.

Results

The data was analyzed using SPSS (version 19). Univariate analysis was used in order to examine each variable and Cronbach Alpha coefficient was used to calculate internal consistency. The relationships between variables were examined using with Pearson correlation and multiple hierarchical regression.

Table 1. *Descriptive statistics and correlations between the variables*

Variables	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Age	44.09	8.79	-	.05	.12	-.11	.25	.10	-.03	-.03	.06	-.02
Duration of care	31.76	29.6	-		-.03	.12	-.12	-	-.09	-.05	.00	-.04
Psychological distress	15.44	4.11	-	-	-	.36**	.43**	.30*	-.00	-.12	-.15	-.07
Caregiver burden	21.73	5.51	-	-	-	-	.52**	-.29*	.30*	.23	.07	.13
Depression	5.36	4.89	-	-	-	-	-	-	.33*	-.03	.00	.16
Problem focused coping	18.09	1.69	-	-	-	-	-	.43**	-.12	.23	.13	-.00
Emotion focused coping	14.57	3.34	-	-	-	-	-	-.34*	-	.09	.06	.09
Emotional labor	33.59	7.81	-	-	-	-	-	-	-	-	.72**	.37**
Deep acting	6.48	3.01	-	-	-	-	-	-	-	-	-	.16
Surface acting	6.01	2.07	-	-	-	-	-	-	-	-	-	-

$N = 52$, ** $p < .001$, * $p < .05$

Hierarchical multiple regression in three steps was performed in order to test the moderating effects of depression symptoms on the relationship between caregiver burden and psychological distress. Before running the analysis, the independent variable (caregiver burden) and the moderator (depression symptoms) were standardized in z scores. The psychological distress was entered as a dependent variable. Caregiver burden was entered as a predictor in the first block of the model; symptoms of depression (the moderator) were entered in the second block; and the multiplication of the two predictors (burden x depressive symptoms) was entered in the third block of the model. The statistical analysis showed a significant positive correlation between caregiver burden and psychological distress (N =52, r=.36, p < .01) and a significant positive correlation between depression symptoms and psychological distress (N =52, r=.43, p < .01).

The results of the multiple regression are displayed in Table 2. Both caregiver burden

($\beta = .38$) and depression symptoms ($\beta = .28$) were significant predictors of psychological health (see Table 2). Caregiver burden, introduced in the first step of the analysis, explained 14.7% ($R^2 = .147$, $p < .01$) of the variance in psychological distress. The variable entered in the second block, depressive symptoms, explained 5.6% of the variance in psychological distress in addition to caregiver burden ($\Delta R^2 = .056$, $p < .01$). The introduction of the interaction variables (predictor x moderator) in the third block of the analysis generated a significant model ($F(3.48) = 9.74$, $p < .05$). Thus, the interaction between burden and depression symptoms has a significant effect. This effect explains 17.6% of the variance in psychological distress in addition to the previously analyzed variables ($\Delta R^2 = .176$, $p < .001$). In conclusion, depressive symptoms moderate the relationship between caregiver burden and psychological distress.

Table 2. Hierarchical multiple regression predicting psychological health

Steps	Predictors	β	β	β
1	Burden	.38*	.22	.061
2	Depression		.28*	.18
3	Burden × Depression			.48**
	Total R ²	.147*	.202	.379
	ΔR^2	-	.056*	.176**
	Final F	8.58*	6.22*	9.74**

Note: *p<.01; **p<.001

Figure 1 shows that there is a high positive relationship between perceived burden and psychological distress when the level of depression is high. In contrary, when the level of depression is low there is a negative association between burden and psychological

distress. In conclusion, depressive symptoms moderate the relationship between caregiver burden and psychological distress, increasing the level of distress.

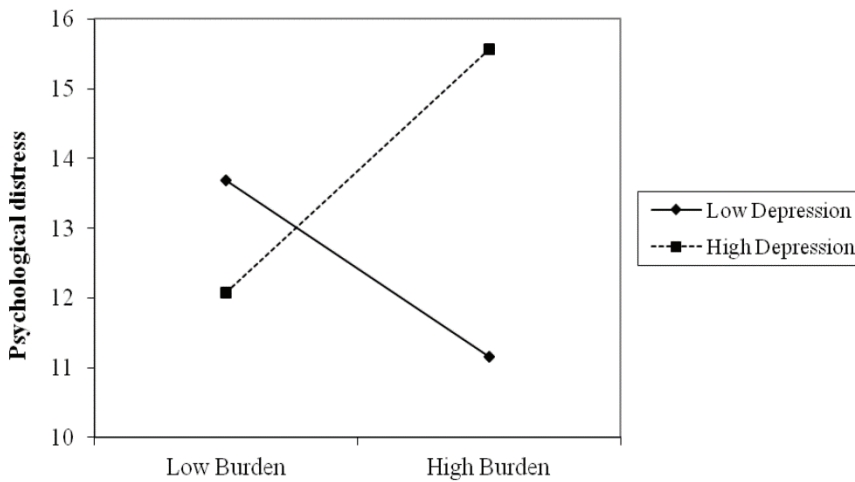


Figure 1. *The moderating role of depression symptoms in the relationship between burden and psychological distress*

The statistical analysis showed a significant negative correlation between problem-focused coping and caregiver burden ($r = -.43$, $p < .01$) and a significant positive correlation between emotional-focused coping and caregiver burden ($r = .30$, $p < .05$). The descriptive statistical analysis revealed that the carers seemed to use more often problem-focused strategies than emotion-focused strategies. The scores for problem focused coping scale ranged from 14 to 20 ($M = 18.09$; $SD = 1.69$), after deleting one item during measurement validation procedures, while the scores for emotion-focused coping scale ranged from 6 to 21 ($M = 14.57$; $SD = 3.34$).

Hypotheses 2 and 3 were tested with hierarchical regression in three steps. First a measurement validation procedure was performed, where some items were deleted in order to increase the internal consistency coefficients of the instruments. Before running the analysis, the independent variable (caregiver burden) and the moderators, emotional-focused coping, respectively, problem-focused coping were standardized

in z scores. The psychological distress was entered as a dependent variable. Caregiver burden was entered as a predictor in the first block of the model; the moderator (emotional-focused coping, respectively, problem-focused coping) was entered in the second block; and the multiplication of the predictors was entered in the third block of the model. The results of the multiple regression are displayed in Table 3 and 4.

The effects of emotional-focused coping on the relationship between burden and psychological distress are presented in Table 3. Only caregiver burden turned out to be a significant predictor of psychological distress ($\beta = .38$) and explained 14.7% ($R^2 = .147$, $p < .01$) of the variance. Neither the emotional focused-coping ($\Delta R^2 = .033$, $p > .01$), nor the multiplication of the two predictors ($\Delta R^2 = .001$, $p > .01$) did not have a significant effect. In conclusion, in the case of this particular study group, emotional focused coping does not moderate the relationship between caregiver burden and psychological distress. Hypothesis 2 was not supported.

Table 3. Hierarchical multiple regression predicting psychological health

Steps	Predictors	β	β	β
1	Burden	.38*	.43	.43
2	Emotional – focused coping		-.19	-.20
3	Burden × Emotional – focused coping			-.03
	Total R ²	.147*	.180	.181
	ΔR^2	-	.033	.001
	Final F	8.58*	5.37	3.53

Note:*p<.01; **p<.001

The effects of problem- focused coping on the relationship between burden and psychological distress are presented in Table 4. Problem focused coping failed to make a significant contribution in the variance of psychological distress ($\Delta R^2 = .021, p > .01$),

as well as the multiplication of the two predictors ($\Delta R^2 = .031, p > .01$). Thus, neither the problem focused coping does not have a moderating effect on the relationship between burden and psychological distress. Hypothesis 3 was not supported.

Table 4. Hierarchical multiple regression predicting psychological health

Steps	Predictors	β	β	β
1	Burden	.38*	.30*	.20
2	Problem - focused coping		-.16	-.14
3	Burden × Problem – focused coping			-.20
	Total R ²	.147*	.167	.198
	ΔR^2	-	.021	.031
	Final F	8.58*	4.92	3.95

Note:*p<.01; **p<.001

No support was found for the fourth hypothesis. There was no significant correlation between surface acting and psychological distress ($r = -.07, p > .05, ns.$).

There was no significant correlation between surface acting and depression symptoms ($r = -.16, p > .05, ns.$)

Discussion

The first hypothesis of the present study tested the assumption that depressive symptoms moderate the relationship between caregiver burden and psychological distress. Both depressive symptoms and caregiver burden turned out to be significant predictors of psychological distress. These findings are consistent with previous studies. Donaldson and al. (1998) have found that the depression was the strongest predictor of distress; McConaghy and Caltabiano (2005) and Yang and al. (2012) have found that caregiver burden is a significant contributor to psychological distress. More than that, the result of the present study supports the assumption that depressive symptoms increase the level of psychological distress for the caregivers that perceive a high level of burden. The interaction between burden and depression explained 17.6% of the variance in psychological distress in addition to the variables analyzed in the first steps of the model. In conclusion, the caregivers that have a high level of burden and suffer from depression symptoms are affected by a higher level of psychological distress than the ones that don't suffer from depressive symptoms. However, it should be noted that in the present study only a small percent of the caregivers were at a risk from suffering of depression (only 13.46%). The results showed that 7 caregivers suffered from mild depression (Beck score 11-19) and no caregivers suffered from moderate or severe depression. This findings are not in line with McConaghy's and Caltabiano's (2005) study where almost 60% of caregivers (N =42) turned out to be at risk of experiencing depression.

This study aimed to also analyze the impact of coping strategies on psychological health, therefore the moderation effect of emotional-focused coping and problem-focused coping was tested.

The second hypothesis stated that emotional- focused coping moderates the relationship between caregiver burden and psychological distress. The results did not support this hypothesis although a significant positively correlation between emotional-focused coping and caregiver burden has

been found. Di Mattei and al. (2008) have found that a coping style characterized by an effort to minimize, avoid or ridicule the entity and impact of stressors may predispose caregivers to higher levels of burden of distress. These results sustain the assumption that an emotional- focused coping strategy is rather related with negative psychological outcomes. However, according to Stowell, Glaser, and Glaser (2001), in some chronic stress conditions, both coping strategies appeared to have positive benefits on health and well-being. Concerning this issue, Chappell, Reid, and Dow (2001) suggested that in the case of caring for a person suffering from a terminal or protracted illness caregiver attempts to actively solve the problem may become more stressful because there is actually very little or nothing they can do to change the situation, therefore it may be more beneficial for them to adopt an emotional- coping strategy in order and to protect their own psychological state.

The present study presents a cross-sectional design and does not provide an answer concerning the direction of causality in the relationship between emotional coping and caregiver's burden. As suggested by McConaghy and Caltabiano (2005) the results can be interpreted in a different way. For example, high levels of burden may influence the coping strategies adopted by the caregiver, promoting the use of avoidance coping. Regarding the moderation effect of emotional focused coping, the sample size and the small internal consistency coefficient of the coping scale should be taken into consideration.

The third hypothesis stated that problem-focused coping moderates the relationship between burden and psychological distress. The results did not support this assumption; although there was a significant negatively correlation between problem - focused coping and caregiver burden. McConaghy and Caltabiano (2005) and Di Mattei and al. (2008) also found a statistically significant association between problem- focused coping style and caregiver burden. In conclusion, problem- focused coping could act as a protective factor against burden of distress. The descriptive statistical analysis revealed that the carers seemed to use more often

problem-focused strategies than emotional-focused strategies, although some previous studies in this area suggest that females use more often emotion-focused coping (Lazarus & Folkman, 1984; Ptacek, Smith, & Zanas, 1992). The results of this study are consistent with those of Stowell, Glaser, and Glaser (2001) which reported that on average, active coping ($M = 12.17$, $SD = 1.68$) was used a greater amount than avoidance coping ($M = 6.69$, $SD = 1.67$) among caregivers.

With respect to the correlations between coping strategies and burden the results of the present study are in line with the widely accepted assumptions that problem-focused coping strategy is associated with positive psychological outcomes and emotional-focused coping strategy is rather related with negative outcomes. The moderation role of coping strategies in the relationship between burden and psychological health should be further investigated on a larger sample, giving the fact that coping strategies are means of defense against stress that can be learned and adopting an appropriate coping strategy might be helpful for those suffering from burden.

The fourth hypothesis (4a) of the study stated that surface acting, as a dimension of emotional labor, is positively associated with psychological distress. There was no significant correlation found between these variables. The assumption that surface acting relates to psychological distress was based on the findings of previous studies. Brotheridge and Lee (2003) and, also, Zammuner and Galli (2005) associated surface acting with emotional exhaustion, depersonalization and negative affectivity. Mueller, Rubenstein, Long, Buckman, Zhang, Halvorsen-Ganepola (2013) found that surface acting is associated with higher level of stress/exhaustion. Therefore, it was expected to be a correlation between psychological distress and surface acting. The reason why the result of the present study was not in line with previous studies might be the different constructs and the different instruments. In Zammuner and Galli's (2005) study, as well as in the study of Brotheridge and Lee (2003) the relationship between burnout (measured with Maslach Burnout Inventory, Maslach &

Jackson, 1986) and surface acting was investigated, while in the present study the relationship between psychological distress, measured with GHQ-12, and surface acting was investigated.

Also, the fourth hypothesis (4b) of the present study tested the assumptions that surface acting (as a dimension of emotional labor) is positively associated with depression symptoms. The results in the current study did not support this hypothesis. This is not in line with the result of Yoon and Kim (2013) which have found that surface acting is an important contributor to depressive symptoms. In their study, they also used items from Brotheridge and Lee (2003) emotional labor scale in order to measure deep and surface acting, but they have assessed depression with a different instrument (the South Korean version of the Center for Epidemiologic Studies rating scale for Depression, CES-D). When interpreting this result, sample characteristics should be taken into consideration, namely, the fact that the depression levels were very low in this particular group and also the scores for surface acting were quite low ($M = 6.01$, $SD = 2.07$). In addition, it should be noted the fact that the participants of this study were caregivers, while in the study mentioned above the participants were nurses. Consistent with previous literature (Yoon & Kim, 2013; Chou, Hecker, & Martin, 2012) the participants reported to use more often deep acting ($M = 6.48$, $SD = 3.01$) than surface acting ($M = 6.01$, $SD = 2.07$).

In the present research, no significant relationships between emotional labor and mental health have been revealed. Unlike the nurses, the caregivers do not interact with more patients a day, they have to be there and to take care only for one patient. The relationship between the elderly and caregiver is very important. Being there for a patient, day and night, over a period of months, can lead to the formation of a relationship based on authentic attachment and sympathy between the carer and the patient. The carer might no longer have to hide their true feelings and fake unfelt emotions towards the patient; therefore, they might no longer use such strategies as surface acting.

Limitations and future research

The present study has a cross-sectional design implying that no cause-effect conclusions can be drawn regarding the participant's perception of burden, psychological distress, depression symptomatology, emotional labor and coping. The convenience sample of caregivers limits the generalization of the findings to a larger population. The small sample also inhibited the use of more sophisticated analysis that may have supported some of the hypothesis.

Additional research, encompassing a larger number of caregivers and a more sophisticated statistical analysis of the variables is needed in order to gain a more complex understanding of the factors that contribute to the mental health of caregivers.

Future research should investigate the effects of competence on caregiver's health and well-being. A comparative study, investigating general health and associated factors among caregivers with formal competence and with no formal competence is suggested. Not least, a closer analysis of the social and demographic characteristics of the caregivers and the impact of these variables on mental health should be taken into consideration in future studies.

Practical implications

The present findings have practical implications for recruiting agencies specialized in the field of home health care and, especially, for the providers of home caregiving training. First of all the caregivers should be informed about the negative impact that elderly care giving could have on their health. Given the results of the present study and of the previous literature, the introduction of coping strategies modules and counseling hours into training programs for caregivers is recommended. According to Di Mattei and al. (2008, pp. 388), "psychological interventions should focus on the acquisition and enhancement of functional coping strategies (i.e., active and problem-focused coping) and on the modifications of dysfunctional ones (i.e., avoidance coping)". Also the caregivers should be informed about the coping skills importance and their impact on one's health

and well-being. The support groups for caregivers turned out to be very effective method in improving the psychological health of caregivers. Wei, Chu, Chen, Hsueh, Chang, Chang, and Chou (2011) showed that an intervention based on information, problem solving, coping, and support has significantly positive effects on the physical-psychological health of caregivers.

Conclusions

The findings from the current study indicate that carers of elderly persons are at a risk of developing psychological health problems. The relationship between caregiver burden and psychological distress is moderated by depressive symptoms. Emotion focused coping may represent a risk factor associated with higher levels of burden, while problem-focused coping may act as a protective factor.

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