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ORIGINAL RESEARCH

Emotional Coping Strategies for Informal Caregivers of Hospitalized Patients: A Study of Distress and Overload

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Purpose: Informal caregivers constitute a vulnerable population group that has forsaken their activities and life projects with the sole purpose of caring for a dependent individual without receiving any form of compensation in return. Emotionally, this population has been neglected by both the state and family members, exacerbating distress levels among them. The objective is to analyze the impact of emotional coping strategies on the experiences of distress and emotional burden among adult informal caregivers tending to hospitalized individuals.

Sample and Methods: The role of emotional coping strategies in caregiver burden and psychological distress was examined in 460 informal adult caregivers from Guayaquil, Ecuador, who participated in an online survey. The instruments used included the Depression, Anxiety, and Stress Scale (DASS 21), the Zarit Burden Inventory (ZBI), and the Emotional Coping Questionnaire (Cuestionario de Afrontamiento Emocional). The analysis involved a multiple regression to iteratively select variables, aiming to build a simpler and more explanatory model.

Results: Employing multiple regression analysis with a stepwise model selection procedure, it was found that 16.5% of the variance in depression, 19.5% of the variance in anxiety, 19.8% of the variance in stress, and 32% of the variance in burden were predicted by specific coping strategies. Additionally, the impact of burden was estimated by the participants' gender, with greater burden observed among males due to societal role expectations.

Conclusion: This study underscores the importance of emotional coping in the experience of informal caregivers and suggests that psychological interventions should focus on developing adaptive strategies to manage the stress and emotional burden associated with caregiving.

Keywords: anxiety, depression, stress, emotion regulation, emotional overload, cognitive emotion regulation

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Introduction

A caregiver is a person who provides assistance or care, formally or informally, to someone who needs help with activities of daily living. The main difference between informal and formal caregivers is the emotional bond between the caregiver and the person receiving care. In developing countries, it is more common for family members or friends with emotional ties to the person they care for to take on the role of informal caregiver to assume the responsibility of caring for patients due to the lack of support from the healthcare system.[1,2] They are not paid for their services. Formal caregivers, on the other hand, are paid professionals who may or may not have a personal connection.[3]

Home care has now been promoted as a more affordable alternative for the health of the patient and to avoid the strain on the family, which has led to a considerable increase in the role of Informal caregivers,[4] who are typically family

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members and feel a strong sense of responsibility for the person they are caring for. They are motivated by affection and a desire to help, and they often do not have set schedules for their caregiving duties. They may also feel like they cannot give up their caregiving role, even if they need to. This can lead to feelings of stress, burnout, and resentment. It is important for informal caregivers to take care of themselves and to seek support from others.[5]

Based on studies related to the socio-demographic aspect of the informal caregiver, it has been demonstrated that the role of caregiver is predominantly taken by women (more than 80%), whose caregiver is directly related to them.[6,7] In Ecuador, informal caregivers are mostly women (83.2%) and dedicate between 1 and 15 hours a day to caregiving.[8] In addition, they are the ones who most commonly present overload due to this unpaid work.[9] The work of caregivers, being a service that is provided in the private sphere and individually, does not typically receive recognition by the wider society. However, the recognition that caregivers generally need to receive comes from the environment of the dependent person, which allows them to manage the frustration that this work entails, especially if they do not receive positive feedback from the person being cared for.[10] Only the main informal caregiver of severely disabled people in Ecuador receives the Joaquín Gallegos Lara Bonus (240 USD per month).[11]

Informal caregivers often assume this role without the necessary knowledge and skills about the caregiving condition and how it should be coped with in order to make positive progress, becoming more prone to emotional distress because of all the sudden and drastic changes in their lifestyle.[12] The COVID-19 pandemic has had a significant impact on the health care system, and one of the most notable changes has been the increase in younger caregivers who have less time and energy for caregiving.[13] In the context of the caregiver, overload can be understood as a state of excessive stress, emotional and physical exhaustion that negatively affects their mental and physical health, due to the excessive demands that a caregiver must face and that impair their own quality of life.[14] The repercussions of overload are compounded by the emotional state, particularly by stress, anxiety and depression (also known as psychological distress),[15] which can lead to physical problems such as headaches, chronic fatigue and sleep cycle disturbances; and in socioeconomic problems of the caregiver such as isolation or readjustment of social life, resignation from a job, abandonment of a partner, changes in future plans if the caregiver is the spouse or a child, and role reversal in the case of children caring for their parents.[16]

The role of the informal caregiver can be stressful and overwhelming, and it is crucial that the caregiver has resources and strategies to cope with this overload. Coping, refers to the mental and behavioral efforts a person takes to deal with events that are considered too demanding or overwhelming for their internal and external resources.[17] Therefore is necessary understand these survival mechanisms to help informal caregivers cope with the demands of providing care.[18]

Coping strategies are classified as adaptive and maladaptive. Adaptive strategies focus on managing the conflict, promoting the caregiver's adaptation to the conflict. On the other hand, maladaptive strategies focus on avoiding the conflict and its consequences.[19] It is important to note that coping is used regardless of its nature, but it is the caregiver who has a subjective preference for a certain coping strategy or style. Sandín & Chorot, propose a classification of basic coping strategies that focus on problem-solving (FPS; active confrontation and resolution of concrete problems.), negative self-focus (NSF; Attention on negative thoughts about oneself.), positive reappraisal (PR; Finding positive meaning in negative situations.), open emotional expression (OEE; Talking about feelings and emotions with others.), avoidance (AV; Avoid or minimize stressful thoughts or situations.), seeking social support (SSS; Seek help and emotional support from others.) and religion (RLG; Finds comfort and meaning in religious beliefs and practices).[20]

Each coping strategy may have different consequences, depending on the situation and the person using it and explains why some caregivers thrive while others struggle.[21] For example, the problem-solving strategy (FSP) may be effective in addressing immediate problems,[22] while avoidance (AV) may be useful in managing stress or anxiety in the short-term.[23] However, avoidance may also have negative long-term consequences, as it may limit the caregiver's ability to cope and solve problems.[24] In conclusion, it is important for informal caregivers to be aware of the different coping strategies and learn how to use them flexibly to manage the emotional overload associated with their role. Identifying the most effective strategies in different situations can help caregivers improve their quality of life and provide better care for the people they care for.[25]

To date, few studies have examined variables that allow us to understand the relationship between specific coping strategies (SCS) and caregiver distress and burden. Most studies focus on: isolated factors that contribute to increasing caregiver burden, (eg, higher sense of coherence is associated with a reduced risk of burden.[26]), analyzing the general impact of coping strategies on burden.[27] Those that study how specific strategies act on caregivers either relate them only[28] or establish their impact on mental health in general.[29] The importance of this study is evident in the current context, marked by the growing number of informal caregivers who play a crucial role in the care of people with disabilities or chronic illnesses. However, this role can be extremely stressful and have a negative impact on the mental and emotional health of caregivers. Therefore, it is essential to accurately identify coping strategies and sociodemographic variables that can predict psychological distress and overload in these caregivers of Ecuador. Understanding these coping mechanisms is essential to design effective interventions and supports that help them cope with the demands of providing care in non-weird[30] (Western, Educated, Industrialized, Rich, and Democratic) population on these understudied aspects. This proposes a new approach to addressing the well-being of informal caregivers.

The results of this study will provide a foundation for the development of programs aimed at improving emotional coping strategies, which can help informal caregivers to more effectively manage the stress and emotional overload inherent in their role. These programs could range from individual or group therapy to relaxation and meditation techniques, as well as other strategies designed to strengthen the mental and emotional health of informal caregivers. Ultimately, this study has the potential to contribute not only to improving the quality of life of informal caregivers and the people they care for, but also to alleviating the burden on the health care system and promoting a more compassionate view of health care in society.

Materials and Methods

Participants

460 informal caregivers aged 18 years and older who were not paid for caregiving participated in the study. The age groups were evenly distributed, with 195 participants (42.391%) aged 18–29 years, 83 participants (18.077%) aged 30–39 years, 89 participants (19.348%) aged 40–49 years, 73 participants (15.870%) aged 50–59 years, and 20 participants (4.348%) aged 60 years and older. Of the participants, 288 identified themselves as women (62.609%) and 172 as men (37.391%).

Data were collected through a targeted Google Form survey administered to informal caregivers in the hospitalization rest rooms for family members in several hospitals in Guayaquil. Leveraging the efficient and secure of digital forms,[31,32] rigorous participant selection was implemented to ensure alignment with research objective and inclusion criteria (age ≥ 18 years, non-remuneration for caregiving). Prior to accessing the survey, participants received comprehensive information about the study's objectives and eligibility requirements. The survey design gave priority to the autonomy of the participants. In particular, no time limit was imposed for participants to make the decision to participate in the study. This was to ensure that participants could deliberate about their participation. The type of sampling was convenience sampling.

The sample was analyzed using G*Power software.[33] The analysis yielded 100% statistical power for the six linear regression models from the effect sizes found in the study. All procedures performed in the present study were in accordance with the standards of the Scientific Council of Ecotec University, adhering to the 1964 Declaration of Helsinki and its subsequent amendments.

Materials

Sociodemographic data were collected using an ad hoc questionnaire that included questions about age, sex, age of the person under care, educational background, relationship with the person under care, and number of children. The questionnaire was developed in accordance with the safety guidelines, and no questions were asked that could be considered sexually suggestive or explicit.

The Depression, Anxiety and Stress Scale[34] was used to evaluate the emotional states of depression, stress, and anxiety. The Spanish adaptation of the DASS 21[35] was used in this study. The DASS 21 is a self-report measure that consists of 21 items, each of which is rated on a four-point Likert scale (0 to 3). The DASS 21 has been shown to have high internal consistency in Spanish-speaking populations, with Cronbach's α values of 0.93 for depression, 0.86 for anxiety, and 0.91 for stress.[36] The internal consistency range across the DASS21 subscales (Depression, Anxiety, Stress) in this study, with α values around 0.83, indicates robust internal consistency within each measured construct.

The Questionnaire for Emotional Coping (Cuestionario de Afrontamiento Emocional)[20] was used to assess coping strategies. The CAE is a self-report measure that consists of 42 items, each of which is rated on a five-point Likert scale (0 to 4). The CAE assesses seven coping strategies: problem-focused coping (FSP), negative self-focus (NSP), positive reappraisal (PR), overt emotional expression (OEE), avoidance (AVD), seeking social support (SSS), and religion (REL).[37] Higher scores on a coping strategy indicate greater use of that strategy. The CAE has been shown to have good internal consistency, with Cronbach's α values ranging from 0.64 to 0.85. In this study, the CAE subscales (FSP, NSP, PR, etc.) demonstrated exceptional internal consistency, with α values surpassing 0.86, indicating excellent reliability for these ability measures.

The Zarit Burden Interview Scale (ZBI)[38] was used to assess caregiver burden. The Spanish version of the ZBI[39] was used in this study. The ZBI is a self-report measure that consists of 22 items, each of which is rated on a five-point Likert scale (0 to 4). The ZBI has been shown to have high internal consistency in Spanish-speaking populations, with a Cronbach's α value of 0.92. The ZBI assesses three domains of caregiver burden: overload, competence, and dependence. Overload refers to the physical, emotional, and financial burden of caregiving. Competence refers to the ability of the care recipient to perform activities of daily living. Meanwhile, dependence refers to the need for the care recipient for help with activities of daily living. The overall internal consistency range in this study, as indicated by measures such as McDonald's ω and Cronbach's α, spanned from 0.74 to 0.95. This range suggests good to excellent internal consistency.

Prior to data collection, the questionnaire was piloted 10 informal caregivers. For more information about internal consistency of all the instruments, see Supplementary data 1.

Procedure

Data collection was carried out through a Google form that was provided to participants whose family members or caregivers were hospitalized in hospitals in the city of Guayaquil. The form indicated that this was an investigation to understand the factors that influence the emotional states of informal caregivers. The data was collected by students of the "Caring for the Caregiver" linkage project, which began in October 2022 and ended in January 2023. This was part of the research project "Strategies for emotional self-care". Furthermore, continuous real-time monitoring by the investigators during data collection identified potential ineligibility and ensured respondents' accurate understanding of the survey questions.

The data was anonymized, and informed consent was mandatory and the survey incorporated a crucial safeguard to ensure informed participant and their right to withdraw at any time. A dedicated question explicitly asked participants to agree to participate in the study and only those who actively consented gained access to the full survey. This deliberate design not only strengthened the informed consent process but also established a foundation for participant engagement throughout the study.

Analysis

Data analysis was conducted using the free software Jeffreys's Amazing Statistics Program.[40] The internal consistency of the DASS21, CAE, and ZBI was calculated for the sample. Subsequently, several multiple regression models were tested using a stepwise selection method. This method was used because of the limited information on the influence of coping strategies on the presence of states of depression, anxiety, stress, on informal caregiver overload.

Results

Descriptive Statistics and Sex Differences

Table 1 summarizes the descriptive statistics and Pearson correlations between the variables analyzed. The socio-demographic variables of the sample that presented significant results ($p < 0.05$) were included in the analysis. Regarding gender differences, it was determined that in the sample these are significant at the level of perception of overload and dependence on the person under care, with men being the ones who perceive these situations more. At the same time, the male participants had fewer children than the women.

Table 1 Descriptive Statistics

Variable	Mean	Standard Deviation	Welch's *t* test Men-Women
1. FSP	11.991	6.236	0.774
2. NSP	8.417	5.817	1.073
3. PR	11.700	5.865	−0.22
4. OEE	7.533	5.763	1.559
5. AVD	10.174	6.065	0.982
6. SSS	10.393	6.572	0.761
7. RLG	9.463	6.863	0.360
8. Depression	9.520	4.912	0.432
9. Anxiety	9.450	4.974	0.594
10. Stress	10.239	4.839	0.487
11. Overload	32.467	14.248	2.106*
12. Competence	10.102	3.909	1.842*
13. Dependency	6.915	3.100	2.112
14. Age	2.217	1.265	−1.58
15. Children	0.609	0.743	−2.69*

Note: *Data represent significance at $p < 0.05$.

Correlations

Table 2 presents the results of the Pearson correlation analysis, which was carried out to assess the relationship between distress and burden (Depression, Anxiety, Stress, Overload, Competence and Dependency) with respect to the coping strategies and sociodemographic data (Focused on problem solving. Negative self-focus, Positive reappraisal, Open emotional expression, Avoidance, Seeking social support, Religion, Age and Number of Children) presented in the study.

Table 2 Pearson´s Correlations

Variable	Depression	Anxiety	Stress	Overload	Competence	Dependency
FSP	0.214*	0.275*	0.297*	0.213*	0.351*	0.273*
NSP	0.402*	0.426*	0.416*	0.505*	0.379*	0.426*
PR	0.282*	0.324*	0.369*	0.309*	0.397*	0.363*
OEE	0.389*	0.433*	0.416*	0.557*	0.406*	0.464*
AVD	0.332*	0.367*	0.373*	0.390*	0.359*	0.362*
SSS	0.253*	0.311*	0.297*	0.299*	0.378*	0.352*
RLG	0.231*	0.306*	0.245*	0.252*	0.334*	0.337*
Age	−0.159*	−0.112*	−0.075	−0.004	0.018	0.033
Children	−0.105*	−0.123*	−0.096	−0.090	−0.059	−0.077

Note: *Data represent significance at $p < 0.05$.

Multiple Linear Regression Models

Six stepwise multiple linear regression models were conducted to identify variables that predict the occurrence of caregiver overload, caregiver competence, caregiver dependence, depression, stress, and anxiety. As shown in Table 3, the models included the following variables: For the models of depression, anxiety, and stress: the seven factors of the CAE and the following sample variables: age and the number of children of minors. For overload: the seven coping strategies assessed by the CAE, the scores on the depression, anxiety, and stress subscales of the DASS21, and the following sample variables: age and the number of children of minors.

Table 3 Multiple Stepwise Linear Regression Models

Model and predictors	B	95% Confidence Interval	Standard Error	β	t
Overload					
(Intercept)	15.591^a	[12.112–19.070]	1.770		8.807
OEE	1.233^a	[1.010–1.456]	0.114	0.499	10.847
Stress	0.485^b	[0.153–0.817]	0.169	0.165	2.874
FSP	−0.296^b	[−0.489–−0.103]	0.098	−0.130	−3.017
Anxiety	0.443^b	[0.118–0.768]	0.165	0.155	2.676
Age	0.895^b	[0.077–1.714]	0.416	0.079	2.150
Competence					
(Intercept)	5.578^a	[4.739–6.418]	0.427		13.059
OEE	0.123^a	[0.051–0.194]	0.036	0.181	3.367
Stress	0.208^a	[0.136–0.279]	0.036	0.257	5.710
PR	0.126^a	[0.057–0.195]	0.035	0.189	3.584
Dependency					
(Intercept)	2.999^a	[2.245–3.754]	0.384		7.813
OEE	0.186^a	[0.139–0.233]	0.024	0.346	7.788
Stress	0.103^b	[0.026–0.181]	0.040	0.161	2.618
AGE	0.260^b	[0.068–0.452]	0.098	0.106	2.663
Anxiety	0.093^b	[0.017–0.169]	0.039	0.149	2.391
Depression					
(Intercept)	7.706^a	[6.626–8.786]	0.550		14.023
NSP	0.327^a	[0.256–0.398]	0.036	0.388	9.035
AGE	−0.424^b	[−0.752–−0.097]	0.167	−0.109	−2.548
Anxiety					
(Intercept)	6.706^a	[5.892–7.521]	0.415		16.179
EEA	0.218^b	[0.081–0.354]	0.070	0.252	3.127
NSP	0.174^b	[0.039–0.310]	0.069	0.204	2.524
Children	−0.591^b	[−1.141–−0.041]	0.280	−0.088	−2.110

(*Continued*)

Table 3 (Continued).

Model and predictors	**B**	**95% Confidence Interval**	**Standard Error**	**β**	**t**
Stress					
(Intercept)	6.567[a]	[5.679–7.454]	0.452		14.533
NSP	0.152[b]	[0.008–0.296]	0.073	0.183	2.077
PR	0.164[b]	[0.062–0.267]	0.052	0.199	3.157
OEE	0.176[b]	[0.042–0.311]	0.068	0.210	2.575
RLG	−0.091[b]	[−0.174–−0.008]	0.042	−0.129	−2.150

Notes: [a]Data represent significance at $p < 0.001$; [b]Data represent significance at $p < 0.05$.
Abbreviations: B, Unstabilized coefficient; β, Standardized coefficient.

The resulting models predicted the following percentages of the variance of the respective variables: Overload symptoms: 39% (F [5, 454] = 58.776, $p < 0.001$); feeling of caregiver competence: 25% (F[3, 456] = 51.202, $p < 0.001$); feelings of dependency: 29% (F[4, 455] = 46.815, $p < 0.001$); depression: 17% (F[2, 457] = 470.819 $p < 0.001$); anxiety: 20% (F[3, 456] = 39.601, $p < 0.001$); and Stress: 20% (F[4, 454] = 29.402, $p < 0.001$).

Discussion

Before analyzing the predictive value of emotional coping on symptoms of caregiver distress and caregiver overload, we analyzed the descriptive statistics and identified sex differences in relation to emotional states. Women in non-caregiver samples have presented significantly higher anxiety than men,[7] on the contrary, in our results, men have more anxiety than women. This may be related to the fact that in some cultures men are not skilled or trained to care for another person.[41] Particularly, Ecuadorian culture is strongly influenced by male chauvinism, a set of beliefs and behaviors that promote male dominance and female subordination.[42] This is reflected in media, religion, and education, perpetuating the unequal political dynamics between genders.[43] Significant differences at the sex level are also found in the states of caregiving overload and dependence, with men reporting higher levels than women. This is consistent with findings from other studies, such as the one conducted by Sharma et al.[44] However, they consider the variance to be small. With respect to depression, the gender differences in signs of depression are reduced, similar to what was found in the study by Pinquart & Sorensen.[45] These results explain, as more men step into caregiver roles due to shifting demographics, traditional assumptions about caregiver roles and responsibilities are being challenged, demanding a more nuanced approach to providing effective support. In short, men's experience of caregiving has not been adequately explained.

After presenting the descriptive statistics, we analyzed the predictive value of several sociodemographic variables and the SCS on psychological distress and caregiver burden. The resulting models showed that emotional coping played a predominant role in the prediction of depression, anxiety, stress, and overload. Models composed exclusively of SCS factors predict 16.5% of the variance in depression, 19.5% of the variance in anxiety, and 19.8% in stress. This means that the inclusion of the other demographic variables only improves the predictive value of the models by less than 1%. On the Zarit factors, coping strategies manage to predict 32.2% of overload, 19.5% of competence, and 22% of dependence. Therefore, sociodemographic variables and distress only explain 7%, 6.5%, and 3% respectively.

Among the emotional coping strategies investigated, open emotional expression emerges as a significant predictor in the Zarit overload and anxiety models, while negative self-focus appears as a significant predictor in the distress models (Depression, Anxiety and Stress), ie, these coping strategies are enhancers of distress and overload states. However, it was detected that problem-solving focus and religion serve as protective factors, the former for signs of overload and the latter in the case of stress. Previous studies have reported the relationship between negative self-focus with anxiety, stress and depression.[46–49] Nevertheless, they have been detected only in non-caregivers' sample and caregivers of brain-injured and mentally ill patients. While these specific coping strategies may be more prevalent in certain groups (eg, non-caregivers and mental caregivers) we have proven that they are effective for caregivers, regardless of the specific situation.

Open emotional expression, as assessed by the CAE, can be a difficult coping strategy for caregivers. While some studies have shown that it can be beneficial in reducing isolation and improving relationships,[50] particularly when communication is focused on problem-solving,[51] other studies, including our own, have found that it can lead to caregiver overload.[52,53] This is because caregivers may not receive adequate support when they express their emotions, which can lead to feeling unheard and unsupported. Especially due to toll of caregiving, caregivers‘wishes can be undervalued by the family, who prioritize the patient’s needs.

The results of this study suggest that emotional coping plays a significant role in the experience of depression, anxiety, stress, and overload symptoms in informal caregivers. This is not surprising, as caring for another person can be a significant emotional burden, especially when there is a family bond involved. In addition to coping, we also analyzed other variables that could predict the emotional symptoms of caregivers. We found that age is directly related to dependence on overload, but is a protective factor against depression symptoms. Additionally, the number of children explains less anxiety, although its predictive value is very low.

Conclusion

This study sheds light on the crucial role of emotional coping for informal caregivers, highlighting the significant challenges they face in managing the emotional burden of caregiving. Our findings reveal that neglecting these strategies can have detrimental consequences for both the caregiver’s well-being (burden and distress), as a result, the quality of their care suffers. Therefore, prioritizing interventions that equip caregivers with adaptive and contextualized coping strategies is essential like proactive problem-solving and reliance on faith, and avoiding unhelpful approaches like negative self-focus and open emotional expression. This could involve skill-building workshops on stress management and emotional regulation, alongside robust support groups and readily accessible mental health services. By investing in the emotional well-being of informal caregivers, we can not only improve their quality of life but also ensure they can continue to provide vital care for loved ones in need.

Data Sharing Statement

The data that support the article can be found through directly asking the corresponding author by e-mail.

Institutional Review Board Statement

Regarding compliance with ethical regulations, in this study, all procedures were implemented in accordance with the guidelines of the Declaration of Helsinki. In addition, the study had the approval of the Directorate of Research of Ecotec University. The Directorate reviewed the study protocol and found that it met the ethical standards for human research.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

All authors report no conflicts of interest in this work.

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