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Article

Self-Perceived Health, Comorbidity, and Burden Among Older Family Caregivers of Seniors with Severe Mental Disorders: A Cross-Sectional Study

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Highlights

Public health relevance

- Older caregivers of individuals with severe mental disorders represent a growing vulnerable population that may exacerbate existing health inequalities.

Public health significance

- Functional and emotional dimensions show stronger associations with self-perceived health than the number of comorbidities among older caregivers of people with severe mental disorders.

Public health implications

- Public health policies aimed at older caregivers must transcend the disease-centered approach, emphasize gender equity, and provide well-being tools in the functional and emotional dimensions.

Abstract

The global aging process has increased the number of older individuals providing care for relatives with severe mental disorders (SMD). This population faces unique health challenges. The present cross-sectional study examined the relationship between self-perceived health (SPH) and clinical, functional, and sociodemographic variables among 71 older caregivers (median age: 65 years) in Bogotá, Colombia. Data were collected using the SF-36 and Zarit scales and analyzed using descriptive statistics and logistic regression. The results revealed a marked feminization of caregiving (92.96%) and a high prevalence of good SPH (70.42%), despite a substantial burden of physical comorbidities (mean: 3.21). Dimensions such as physical functioning, emotional well-being, and pain were significant in univariate analyses. However, the multivariate model identified general health as the only independent predictor of good SPH (adjusted odds ratio [OR]: 1.112; 95% confidence interval [CI]: 1.053–1.174; $p < 0.001$). These findings suggest that subjective health assessment may transcend objective disease counts for older caregivers. Public health policies could prioritize wellness-based interventions and emotional support over traditional disease-centered approaches to improve the quality of life of this growing, active, socially valuable, yet vulnerable population.

Keywords: self-perceived health; older caregivers; severe mental disorder; caregiver burden; comorbidity

1. Introduction

Population aging is a global phenomenon reshaping social and family structures. Currently, the world population is estimated at 8.083 billion people, of whom approximately 10% are aged 65 years and older [1]. By 2050, the population aged 60 years and over is expected to reach 2.1 billion [2]. In Colombia, this demographic shift is also significant; according to data from DANE, older adults currently account for 15% of the population, and it is projected that by 2070 they will constitute 36% of the national total [2].

The growing proportion of older adults is associated with a higher incidence of chronic diseases, including hypertension, diabetes, and major neurocognitive disorders (MNCD), also known as dementias. Nearly 139 million people worldwide are expected to live with MNCD by 2050 [3]. These pathologies are accompanied by progressive functional decline and long-term care needs, resulting in a significant familial, social, and economic impact [4] — a situation commonly observed in other severe, long-term psychiatric disorders. In Latin America and the Caribbean, care is predominantly provided by families; 60% of this care is delivered by women, who are 8% less likely to have formal employment [5]. In Colombia, there were 6.8 million full-time unpaid caregivers in 2023, 85.7% of whom were women. [6]. Among older adults, 1,232,335 live with a disability [7]; 70.7% of those requiring care receive it from a cohabitant, primarily a woman (86%). Notably, 43% of these caregivers are also older adults, and only 5.6% are remunerated [8].

Evidence indicates that while caregiving can improve resilience and a sense of purpose [9], it is also associated with negative effects across physical, emotional, and social domains. Older caregivers often report perceived deterioration in mental health linked to emotional bonds, burden, and lack of support. Due to cohabitation, family caregivers devote substantial time to work (averaging 10 hours daily) and maintain a strong emotional relationship that may exhibit characteristics of codependency [10,11].

Furthermore, for caregivers, who are primarily family members and, as mentioned, mostly women, quality of life encompasses multiple elements, such as emotional well-being, interpersonal relationships, personal development, material needs, rights, self-determination, and social inclusion [12], in addition to their own well-being and that of the care recipient. To ensure the well-being of the person in their care, caregivers must modify their daily lives, which can lead to worry, stress, mood changes, constant fear, physical and emotional deterioration, self-neglect, job abandonment, health problems, decompensation of underlying diseases, lack of treatment adherence, social isolation, and poor self-care skills. These factors may contribute to caregiver burden syndrome. [13].

Self-Perceived Health (SPH) is a subjective assessment considered reliable and widely used in older adults. Associations have been found between poor SPH and factors such as age, female gender, unhealthy lifestyle, functional limitations, number of diseases, and poor social support [14–16]. Among caregivers and SPH, those who do not feel overburdened report better SPH and mental health [17]. However, previous studies in Colombia (SABE Survey) concluded that most caregivers report good SPH despite physical fatigue [18]; while a reduction in SPH related to care burden has also been reported [10,19].

To date, available scientific evidence on health conditions and SPH among older caregivers of relatives with severe mental disorders in Latin America is limited. It is hypothesized that this population experiences a higher caregiving burden due to restricted autonomy, increased care needs, and disruption of roles, among other alterations in the care recipient. These conditions require special forms of care, causing differential physical and emotional impacts [5,20]. In this context, the primary objective of this study was to explore the association between SPH in older family caregivers and variables such as comorbidity, pain, and care burden to inform the future development of interventions tailored to their specific needs.

2. Materials and Methods

2.1. Study Design and Population

A cross-sectional analytical study was conducted. The study population consisted of individuals aged 60 years and older who had dedicated at least 24 hours per week for more than six months to caring for older relatives with severe mental disorders and functional dependency (Barthel Index score < 60 points). A convenience sample was used, comprising 71 participants (n = 71) enrolled in a broader study on caregiver burden and self-care interventions.

2.2. Procedures and Ethics

The research was conducted in accordance with the principles of the Declaration of Helsinki. The study protocol was submitted for evaluation and received formal approval from the institutional Research Ethics Committee (protocol code 070-2023; approved on June 8, 2023). The principle of autonomy was ensured by obtaining written informed consent from each participant prior to data collection. The custody, confidentiality, and anonymity of the information were strictly guaranteed.

2.3. Data Collection and Instrument

Data were collected using standardized and validated instruments to ensure reliability. The following variables and tools were employed:

- Sociodemographic and Clinical Data: Information on age, sex, number of comorbidities, and presence of pain was obtained through self-report questionnaires.
- Self-Perceived Health (SPH): This served as the primary outcome variable. Participants assessed their overall health status by answering the question: "How would you describe your overall health status?" Responses were categorized as "Good SPH" or "Poor SPH."
- Zarit Caregiver Burden Interview: A 22-item version used to quantify the degree of caregiving burden. Scores were interpreted as: 0–46 (no burden), 47–55 (mild burden), and 56–88 (severe burden) [21].
- SF-36 Health Survey (Colombian Spanish version): Used for the multidimensional assessment of Health-Related Quality of Life (HRQoL). It measures dimensions such as physical functioning, role limitations (physical and emotional), energy/fatigue, emotional well-being, social functioning, bodily pain, and general health. Scores range from 0 to 100, with higher values indicating better health status [22].

2.4. Statistical Analysis

The data analysis was structured into three phases:

- Descriptive Analysis: Quantitative variables (age and scale scores) were described using medians and interquartile ranges (IQR) or means and standard deviations (SD), depending on their distribution. Categorical variables were presented as absolute and relative frequencies.
- Comparative Analysis: Differences between SPH groups (Good vs. Poor) were evaluated using non-parametric tests, specifically the Mann–Whitney U test for median comparison. The significance threshold was set at $p < 0.05$.
- Association Modeling: A logistic regression model was employed to identify predictors of good SPH. Crude Odds Ratios (OR) were calculated for univariate analysis, and adjusted Odds Ratios (aOR) were calculated using a multivariate model to identify independent factors. All estimates are presented with their respective 95% confidence intervals (CI).

3. Results

3.1. Sociodemographic and Clinical Characteristics

The study population consisted of 71 caregivers. The median age of the participants was 65 years (IQR: 62–72). A marked feminization of caregiving was observed, with 92.96% (n = 66) being women compared to 7.04% (n = 5) men. Regarding physical health status, the mean number of comorbidities was 3.21 (SD: 1.90); the most frequent categories were 2, 3, and 5 concurrent diseases, each representing 19.72% of the sample.

In terms of caregiver burden measured by the Zarit scale, the mean score was 48.46 (SD: 14.87). Notably, 52.11% (n = 37) of the participants showed no burden, while 33.80% (n = 24) exhibited moderate to intense burden levels. The complete characterization of the sample is presented in Table 1.

Table 1. Sociodemographic and clinical characterization of the population (n = 71).

Variable	Mesure (n = 71)
Age (Median and IQR)	65 (62–72)
Sex female n (%)	66 (92.96%)
Sex male n (%)	5 (7.04%)
Comorbidities	
Average (Mean and SD)	3.21 (1.90)
Zarit Caregiver Burden Interview	
Score (Mean and SD)	48.46 (14.87)
No burden, n (%)	37 (52.11%)
Mild burden, n (%)	10 (14.08%)
Moderate or intense burden n (%)	24 (33.80%)
SF-36 Dimensions (Median and IQR)	
Physical Functioning	90 (70–95)
General Health	75 (55–80)
Good overall SPH, n (%)	50 (70.42%)

IQR: Interquartile Range; SD: Standard Deviation; SPH: Self-Perceived Health.

3.2. Comparative Analysis According to Self-Perceived Health (SPH)

When comparing groups based on their health perception, 70.42% (n = 50) reported good SPH. Statistically significant differences ($p < 0.05$) were identified in the functional and emotional dimensions of the SF-36 between participants who perceived their health as good and those who perceived it as poor.

Specifically, the Good SPH group presented significantly higher scores in physical functioning (90 vs. 70; $p = 0.004$), emotional well-being (72 vs. 48; $p = 0.008$), and a notable difference in pain perception, with a median of 89 compared to 45 in the poor perception group ($p = 0.000$). Variables

such as age ($p = 0.395$), sex ($p = 0.133$), and the average number of comorbidities ($p = 0.170$) showed no significant differences between the groups (Table 2).

Table 2. Comparison of clinical and functional variables according to Self-Perceived Health (SPH).

Variable	Total (n=71)	Good SPH (n=50)	Poor SPH (n=21)	p-value*
Clinical Characteristics				
Age (Median, IQR)	65 (62–72)	65 (62–72)	69 (62–74)	0.395
Comorbidities (Mean, SD)	3.21 (1.9)	3.02 (1.8)	3.67 (2.1)	0.170
Zarit Score (Mean, SD)	48.4 (14.8)	46.4 (14.3)	53.3 (15.2)	0.081
SF-36 Dimensions (Median, IQR)				
Physical Functioning	90 (70–95)	90 (80–100)	70 (45–85)	0.004
Role Physical	100 (25–100)	100 (75–100)	50 (0–100)	0.012
Role Emotional	100 (33–100)	100 (66–100)	33 (0–100)	0.002
Energy / Fatigue	60 (45–75)	65 (55–80)	45 (35–65)	0.003
Emotional Well-being	68 (56–80)	72 (64–84)	48 (40–72)	0.008
Social Functioning	75 (50–100)	87 (62–100)	62 (37–75)	0.008
Bodily Pain	77 (45–100)	89 (67–100)	45 (22–67)	< 0.001
General Health	75 (55–80)	75 (70–85)	45 (40–60)	< 0.001

SPH, Self-Perceived Health; IQR, Interquartile Range; SD, Standard Deviation; SF-36, 36-Item Short Form Health Survey; Zarit Score, Zarit Caregiver Burden Interview. * p-value obtained using the Mann-Whitney U test for continuous variables.

3.3. Logistic Regression Analysis

In the univariate analysis (Crude OR), all SF-36 dimensions showed a significant association with the probability of reporting Good SPH. For instance, each unit increase in physical functioning increased the likelihood of reporting good health by 1.042 times ($p=0.004$).

However, in the multivariate (adjusted) model, most variables lost statistical significance, including age, comorbidities, and the Zarit score. The only variable that remained an independent predictor was "General Health": for each unit increase in this score, the probability of having Good SPH increased by 1.112 times (Adjusted OR: 1.112; 95% CI: 1.053–1.174; $p < 0.001$) (Table 3).

Table 3. Factors associated with Good Self-Perceived Health (Logistic Regression Analysis).

Variable	Crude OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Age	1.035	0.95–1.12	0.395	1.059	0.96–1.16	0.214
Sex (Female)	0.344	0.05–2.29	0.270	0.174	0.01–2.48	0.198
Comorbidities	0.824	0.62–1.09	0.172	1.064	0.74–1.52	0.738
Zarit Score	0.969	0.93–1.00	0.081	1.010	0.95–1.06	0.685
SF-36 Dimensions						
Physical Functioning	1.042	1.01–1.07	0.004	0.992	0.94–1.04	0.741
Emotional Well-being	1.047	1.01–1.08	0.008	1.012	0.96–1.06	0.628
Bodily Pain	1.046	1.02–1.07	< 0.001	1.024	0.99–1.05	0.127
General Health	1.101	1.05–1.15	< 0.001	1.112	1.05–1.17	< 0.001

OR: Odds Ratio; CI: Confidence Interval; SF-36: 36-Item Short Form Health Survey. Significance was set at $p < 0.05$.

4. Discussion

The objective of this study was to determine the association between self-perceived health (SPH) and clinical variables (e.g., comorbidity and pain), functional and sociodemographic variables, and caregiver burden among older adults caring for elderly relatives with severe mental disorders (SMD). The findings reveal a reality of significant public health importance, as 70.42% of caregivers reported good SPH. The result indicates processes of adaptation, resilience, and personal gains [23], which have been described as protective mechanisms. These mechanisms enable caregivers to maintain emotional balance and a positive assessment of their well-being despite the continuous demands of caregiving [24].

In contrast, the marked feminization of care observed (92.96% of caregivers were women) is consistent with the distribution of caregiving roles in Colombia and highlights a salient axis of inequity for public health. These caregivers typically engage in extended periods of approximately 10 hours per day, experiencing a substantial emotional strain that, within the Latin American context, is inadequately addressed by regulatory frameworks and support systems, which fail to safeguard women's health against the persistent nature of the disease [25]. Therefore, the present reality

substantiates the necessity to incorporate a gender perspective into institutional monitoring and responses. It is imperative that caregivers be acknowledged as a demographic that merits specific safeguards. This is predicated on the understanding that caregivers routinely encounter profound emotional and physical stresses, compounded by the erratic accessibility of formal assistance. Institutional actions should prioritize holistic well-being over exclusively disease-centered approaches. This priority is grounded in a reflection on the ethics of care.

The consistency of these findings with population reports, such as the SABE Co-lombia Study, suggests that even in the presence of physical and emotional demands, a significant proportion of caregivers maintain a positive global assessment of their health [18]. This underscores the necessity to examine SPH as a multidimensional construct, rather than as a solely biomedical entity. However, while the majority of participants report positive SPH, the experience of mental health caregiving in Colombia is characterized by ambivalent feelings. Research has documented a transformation of identity and lifestyle among family caregivers, with caregiving becoming the central axis of their existence, often under conditions of scarce social support and institutional stigma [26]. This insight is a critical contribution to the field, underscoring the imperative to devise accompaniment strategies that acknowledge this identity shift and provide personalized caregiving tools.

The prevalence of moderate or intense burden in our study was 33.8%, a figure that is notably lower than the 78.4% reported in previous research involving caregivers of people with dementia [27,28]. This discrepancy should be interpreted with caution, as it may be associated with heterogeneity in the profiles of care recipients, disease trajectories, and the healthcare context. This finding suggests that caregiver burden alone does not fully explain the poor health perception among older adults. It demonstrates how caregivers of individuals with SMD employ varied coping strategies. In this sense, resilience could emerge as a factor that modulates the caregiving experience, transforming perceived stress into a functional adaptation capacity that protects the caregiver's general health [25,29]. Nevertheless, sociocultural determinants that frame caregiving as a feminine obligation must also be considered. These determinants often taint any performance-related complaint with guilt.

A central finding of this research is that the functional, emotional, bodily pain, and general health dimensions of the SF-36 showed significant associations with good SPH in the univariate analysis, whereas the number of comorbidities showed no significant association. This finding is consistent with other studies indicating that when caregiving burden affects physical health, it can generate emotional distress that deteriorates caregivers' overall health [30].

In the final multivariate model, the General Health dimension of the SF-36 remained the only independent predictor of SPH. This finding can be explained by two non-exclusive factors. First, several SF-36 dimensions demonstrate conceptual overlap and correlation (pain, physical functioning, and energy), which leads to competition for explained variance when adjusted simultaneously. Secondly, the General Health dimension may serve as a global assessment closely related to the judgment of SPH. This integration of the influence of daily experiences on self-perceived well-being extends beyond the biomedical model to include psychological and social dimensions that contribute to positive aging [30]. In this regard, a fundamental challenge for aging research is the recognition that pathophysiological conditions are not the sole determinants of health. Enjoyment and perceived well-being are critical components of quality of life.

In the context of comorbidity, caregivers exhibiting poor SPH reported a higher average number of medical conditions. However, this variable did not maintain an independent association after adjustment. From an epidemiological perspective, this may reflect inherent measurement limitations, such as the use of an unweighted count that does not account for severity, clinical control, or functional impact, as well as a possible indirect pathway: comorbidity may influence SPH primarily through symptomatic manifestations or functional limitations (e.g., pain, fatigue, and restricted functioning), domains in which clear differences were observed between groups. Consequently, the absence of an independent association does not necessarily indicate clinical irrelevance. Rather, the relationship between comorbidity and SPH may be mediated by functional and subjective outcomes

more closely related to daily experience, as also suggested by the role of the “General Health” dimension”

A notable strength of this research is its focus on a population that plays a critical social role—that of vulnerable and frequently understudied individuals. Specifically, the study focuses on older caregivers who provide care for individuals with severe mental disorders. This population has been overlooked in traditional literature, which has historically focused exclusively on dementia caregivers. The methodological rigor of the study is supported by two factors. First, the study utilizes instruments that have been validated on an international level. The SF-36 and Zarit scale are examples of instruments that have been validated on an international level. Second, the study employs adjusted regression models. These models allow for the precise identification of independent predictors. In addition, the study offers substantial empirical evidence to support the development of public health policies that acknowledge perceived health as a reliable and multidimensional clinical indicator for interventions.

However, the study has limitations that must be considered. Due to its cross-sectional design, it is not possible to establish causal relationships between functionality or burden and self-perceived health. Furthermore, the sample size and the convenience sampling method employed in high-complexity centers in Bogotá may limit the representativeness of the findings compared to caregivers in rural contexts or with different levels of access to health services. Finally, given that the data are based on self-report instruments, there is a possibility of subjective bias. It is therefore recommended that future studies consider more parsimonious models and the inclusion of contextual caregiving variables (care intensity, social support, and functional dependency of the recipient) to improve model specification.

In summary, the results of this study indicate that for caregivers of elderly relatives with SMD, SPH is closely linked to the global assessment of health status. From a public health perspective, these findings can inform the development of policies that transition towards holistic well-being models associated with global health perception.

5. Conclusions

The marked feminization of caregiving and the extensive hours dedicated to care highlight a gender gap that requires attention from public health systems. Social and health policies in Colombia and Latin America should move toward holistic models of well-being that recognize older caregivers as a population in need of special protection. This includes ensuring their rights and promoting gender equity, while implementing interventions focused on emotional support, the promotion of resilience, and the comprehensive management of perceived health in order to sustain caregiving and improve the quality of life of this population.

In informal caregivers, such as older adults responsible for others with severe mental disorders, self-perceived health demonstrated independent association with the general health domain (SF-36). Conversely, the count of comorbidity and the global burden on caregivers did not maintain an independent association following adjustment, thereby underscoring the necessity for healthcare systems to evolve beyond a exclusively biomedical approach. These findings suggest that SPH could be employed as a pragmatic marker to identify potentially vulnerable older caregivers. Integrating a brief screening of global perceived health alongside functional, symptomatic, and well-being assessments into routine evaluations is recommended. The necessity of longitudinal studies with broader contextual measurements of care should be acknowledged. These studies are essential for specifying trajectories and mechanisms, thereby guiding public health strategies.

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Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of Hospital Universitario San Ignacio – Facultad de Medicina de la Pontificia Universidad Javeriana (protocol code 070-2023 and date of approval 08/06/2023).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data analysed are contained within a restricted institutional database and cannot be shared publicly or on request due to privacy, confidentiality, and ethical constraints.

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Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

SPH	Self-perceived health
SMD	Severe mental disorders
HRQoL	Health-related quality of life
MNCD	Mayor neurocognitive disorders
OR	Odds ratio
aOR	Adjusted odds ratio
CI	Confidence interval
IQR	Interquartile range
SD	Standard deviation

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