WORK BURDEN, DEPRESSION, AND ANXIETY AMONG ELDERLY CAREGIVERS : A CROSS-SECTIONAL STUDY IN PELKRIS RETIREMENT HOME, SEMARANG, INDONESIA

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ABSTRAK

Meningkatnya angka harapan hidup dan rasio ketergantungan di Indonesia telah menyebabkan bertambahnya jumlah populasi lanjut usia yang membutuhkan lebih banyak pengasuh. Para pengasuh ini memiliki peran penting dalam memberikan dukungan sosial bagi para lansia. Namun, tuntutan berlebih dalam merawat lansia dapat menyebabkan stres, depresi, dan kecemasan yang signifikan pada pengasuh. Penelitian ini bertujuan untuk mengetahui hubungan antara beban kerja, depresi, dan kecemasan pada pengasuh lansia. Penelitian ini merupakan studi analitik observasional dengan pendekatan potong lintang (cross-sectional). Sampel penelitian terdiri dari 31 pengasuh di Panti Wreda Elim dan Penganyoman Pelkris. Data dikumpulkan melalui wawancara menggunakan kuesioner demografi, *Zarit Burden Interview (ZBI)*, *Patient Health Questionnaire-9 (PHQ-9)*, dan *General Anxiety Disorder-7 (GAD-7)*. Data dianalisis menggunakan uji *Rank Spearman* untuk mengetahui hubungan antar variabel dengan tingkat signifikansi p<0,05. Hasil penelitian menunjukkan bahwa sebagian besar pengasuh (58,1%) mengalami beban kerja minimal. Analisis bivariat menunjukkan adanya hubungan yang signifikan antara beban kerja dengan depresi (p = 0,004) dan kecemasan (p = 0,008) pada pengasuh. Semakin tinggi beban kerja, semakin tinggi pula tingkat depresi (r = 0,491) dan kecemasan (r = 0,471). Kesimpulannya, beban kerja berhubungan dengan tingkat depresi dan kecemasan pada pengasuh di panti wreda.

Kata kunci : beban kerja, depresi, kecemasan, lansia, pengasuh

ABSTRACT

The increasing life expectancy and dependency ratio in Indonesia have resulted in a growing elderly population that requires more caregivers. These caregivers play an essential role in providing social support for the elderly. However, the excessive demands of caregiving can lead to significant stress, depression, and anxiety among caregivers. This study aims to determine the relationship between work burden, depression, and anxiety among elderly caregivers. This research is an observational analytic study using a cross-sectional approach. The study sample consisted of 31 caregivers from Elim and Penganyoman Pelkris Retirement Homes. Data were collected through interviews using a demographic questionnaire, the Zarit Burden Interview (ZBI), the Patient Health Questionnaire-9 (PHQ-9), and the General Anxiety Disorder-7 (GAD-7). Data analysis was performed using the Spearman Rank test to determine the relationship between variables, with a significance level of p<0.05. The results showed that most caregivers (58.1%) experienced a minimal work burden. Bivariate analysis revealed a significant relationship between work burden and both depression (p = 0.004) and anxiety (p = 0.008) among caregivers. Higher work burden was associated with higher levels of depression (r = 0.491) and anxiety (r = 0.471). In conclusion, work burden is correlated with depression and anxiety among caregivers in retirement homes.

Keywords : *anxiety, caregiver, depression, elderly, work burden*

INTRODUCTION

The elderly phase is the final stage of human life, often associated with peace, tranquility, and the hope of enjoying retirement with loved ones. According to *Peraturan Pemerintah Republik Indonesia Nomor 43 Tahun 2004*, the elderly are defined as individuals who have reached the age of 60 years and above. This period, known as the final stage of human

development, is when people anticipate a serene life, filled with care and affection from their children and grandchildren (Presiden Republik Indonesia, 2004). The demographic trend in Indonesia shows a significant increase in the elderly population. The 2019 National Socio-Economic Survey (Susenas) reported that the elderly population in Indonesia had reached 25.7 million people, or approximately 9.6% of the total population. This number was expected to rise to 10% in 2020 and further to 20% by 2040. By 2050, the elderly population in Indonesia is projected to reach 74 million, constituting about 25% of the total population. In 2021, the Directorate General of Population and Civil Registration (Dukcapil) reported that the elderly population in Indonesia had increased to 30.16 million, making up 11.01% of the total population of 273.88 million. In this demographic shift, Central Java ranks second after Yogyakarta, with 11.8% of its population being elderly, highlighting the province's aging trend (TNP2K & The SMERU Research Institute, 2020; Malahati, 2023; Kementerian Kesehatan RI, 2016).

The rising elderly population also leads to an increasing elderly dependency ratio, as reported by the Central Bureau of Statistics (BPS). In 2021, the elderly dependency ratio was 16.76, indicating that 100 working-age individuals (15–59 years) were supporting approximately 17 elderly individuals. This ratio has been steadily increasing over the past five years, reflecting the growing dependency of the elderly population on the younger, working-age population (Badan Pusat Statistik, 2021). The decline in physical and mental conditions among the elderly often results in slower interactions within their environment, leading to increased dependency on others. This dependency requires support to access resources necessary for the well-being of the elderly and to meet their specific needs, which differ significantly from those of the productive age population. As family structures and values evolve, institutional care, such as retirement homes, becomes a viable option to assist the elderly in achieving well-being and fulfilling their needs (Gavarskhar, Gharibi, & Dadgar, 2022).

The largest private retirement home in Semarang, operates two institutions under the *Yayasan Pelayanan Kristen (PELKRIS)*: Panti Werdha Elim and Panti Werdha Pengayoman. In year 2023, Panti Werdha Elim houses 58 elderly residents and employs 17 caregivers, while Panti Werdha Pengayoman accommodates 50 elderly residents with 15 caregivers. The daily activities of the elderly in these institutions require social support, primarily provided by caregivers, who play a crucial role in ensuring the physical and psychological well-being of the residents (Pratiwi, Suprapti, & Murtini, 2012; Ong et al., 2018). Caregiving, particularly for elderly individuals with functional disabilities, can be extremely demanding, often leading to depression among caregivers. The burden of caring for elderly individuals, especially those with dementia, necessitates significant physical and emotional sacrifices, which can result in increased stress levels among caregivers. Studies have shown that up to 40% of caregivers who care for elderly individuals with dementia experience depression and stress. This stress is often exacerbated by the heavy workload, which is a major internal factor contributing to workplace stress. The physical and psychological demands of caregiving, coupled with the responsibilities of managing the health and well-being of the elderly, significantly contribute to the mental health challenges faced by caregivers (Chakraborty, Jana, & Vibhute, 2023; Lane et al., 2022; Aung et al., 2021).

Depression and anxiety are common psychological issues among caregivers, particularly those caring for the elderly. These psychological issues not only affect the well-being of the caregivers but also impact the quality of care provided to the elderly. Therefore, understanding and addressing the mental health needs of caregivers is essential in ensuring both their well-being and the quality of care for the elderly. Therefore, the aim of this study is to assess the relationship between work burden, depression, and anxiety among caregivers working in Pelkris Retirement Home, Semarang, Indonesia. Specifically, the study seeks to identify the

prevalence of depression and anxiety among caregivers, evaluate the impact of their work burden on mental health outcomes, and explore potential factors that may contribute to or mitigate these effects (Gagliardi et al., 2022; Hwang & Hodgson, 2021; Bueno & Chase, 2023).

METHODS

This study is grounded in the field of occupational medicine and employs a quantitative analytical approach. Specifically, it is an observational analytic study using a cross-sectional design. In a cross-sectional study, data for both the independent and dependent variables are collected at a single point in time. The population for this research includes all caregivers working at retirement homes, specifically targeting the caregivers at Panti Werdha Elim and Panti Werdha Pengayoman under the PELKRIS Foundation in Semarang. The study's accessible population consists of 31 caregivers working at these institutions. Given the relatively small size of the population, total sampling was used to include all 31 caregivers in the study. Inclusion criteria for the sample were caregivers who had worked at either Panti Werdha Elim or Panti Werdha Pengayoman for at least one year and were willing to participate in the study. The independent variable in this study is work burden, which was assessed using the Zarit Burden Interview (ZBI), a validated questionnaire consisting of 22 self-rated items. Each item is scored on a 5-point Likert scale, ranging from 0 (never) to 4 (almost always). The total score, ranging from 0 to 88, indicates the level of caregiver burden and is categorized as little or no burden (0–21), mild burden (21–40), moderate burden (41–60), and severe burden (61–88).

The Patient Health Questionnaire-9 (PHQ-9) and the Generalised Anxiety Disorder-7 (GAD-7) scales were used to measure the dependent variables, which are anxiety and depression, respectively. A nine-item self-reported survey of PHQ-9 is used to gauge how severe depression symptoms have been throughout the previous two weeks. A 4-point Likert scale is used to rate each item: 0 means "not at all," 1 means "several days," 2 means "more than half the days," and 3 means "nearly every day." With severity levels categorised as minimum or none (0–4), mild depression (5–9), moderate depression (10–14), moderately severe depression (15–19), and severe depression (20–27), the overall score runs from 0 to 27. As a self-reported measure consisting of seven items, GAD-7 assesses symptoms of generalised anxiety disorder during the previous two weeks. GAD-7 questionnaire has four possible ratings for each item: 0 for "not at all," 1 for "several days," 2 for "more than half the days," and 3 for "nearly every day." The severity is classified as little anxiety (0–4), mild anxiety (5–9), moderate anxiety (10–14), and severe anxiety (15–21), with the total score ranging from 0 to 21. In clinical and research contexts, the PHQ-9 and GAD-7 are both commonly used, validated instruments for screening for anxiety and depression. Threshold scores, such PHQ-9 ≥ 10 or GAD-7 ≥ 10, are frequently used to identify people who need additional clinical examination or intervention. Higher scores imply more symptom intensity.

Data collection was conducted using paper questionnaires, and the analysis was performed using SPSS software version 25. Univariate analysis was used to describe the distribution of age, gender, and work-related variables among caregivers, with results presented as frequency distributions. Bivariate analysis was then conducted to test the hypothesis and determine the relationships between work burden, depression, and anxiety, using the Spearman correlation test with a statistical significance of $p<0.05$. This study was conducted following ethical approval from the Health Research Ethics Committee (KEPK) of the Faculty of Medicine, Universitas Muhammadiyah Semarang, with the ethical clearance number 010/EC/KEPK-FK/UNIMUS/2023. Before data collection, informed consent was obtained from all respondents, who were thoroughly briefed on the study procedures and the questionnaire completion process.

RESULTS

Table 1. **Respondents' Characteristic**

Characteristic	Frequency	Percent
Work Burden		
Minimal burden	18	(58.1%)
Mild burden	12	(38.7%)
Moderate burden	1	(3.2%)
Work Experience		
< 5 years	1	3.2%
> 5 years	30	96.8%
Work Hours per Week		
< 40 hours/week	8	25.8%
> 40 hours/week	23	74.2%
Gender		
Female	27	87.1%
Male	4	12.9%
Age		
< 40 years old	16	51.6%
> 40 years old	15	48.4%

The study participants exhibited a range of characteristics. A significant majority, comprising 96.8%, had over 5 years of work experience, indicating extensive familiarity with their roles. In terms of work hours, 74.2% of participants worked more than 40 hours per week, while the remaining 25.8% worked fewer than 40 hours per week. Gender distribution revealed that 87.1% of participants were female, and 12.9% were male. Regarding age, the sample was nearly evenly divided, with 51.6% of participants being under 40 years old and 48.4% being over 40 years old.

Table 2. **Respondents' Category Based On Caregiver Work Burden (ZBI) Category**

Category	Minimal Caregiving burden	Mild Caregiving burden	Moderate Caregiving burden	Total
Anxiety level (PHQ-9)				
Minimal	15 (78.9%)	4 (21.1%)	0 (0.0%)	19 (61.2%)
Mild	1 (12.5%)	7 (87.5%)	0 (0.0%)	8 (25.8%)
Moderate	2 (66.7%)	1 (33.3%)	0 (0.0%)	3 (9.7%)
Severe	0 (0.0%)	0 (0.0%)	1 (100.0%)	1 (3.2%)
Depression level (GAD-7)				
Minimal	15 (75.0%)	5 (25.0%)	0 (0.0%)	20 (54.5%)
Mild	3 (30.0%)	6 (60.0%)	1 (10.0%)	10 (32.3%)
Moderate	0 (0.0%)	1 (100.0%)	0 (0.0%)	1 (3.2%)
Total	**18 (58.1%)**	**12 (38.7%)**	**1 (3.2%)**	

ZBI: Zarit Burden Interview; PHQ-9: Patient Health Questionnaire-9; GAD-7: Generalized Anxiety Disorder-7

Table 2 examined the respondents characteristic using crosstabulations to understand how stress, depression, and anxiety levels relate to caregiver burden. Overall, the majority of caregivers (58.1%) experienced minimal burden, followed by 38.7% with mild burden, and 3.2% with moderate burden. In the PHQ-9 categories, caregivers with minimal depression mostly reported minimal burden (78.9%), while 21.1% reported mild burden, and none reported moderate burden. In contrast, caregivers in the mild depression category were more likely to report mild burden (87.5%), with only 12.5% reporting minimal burden. For those with moderate depression, the majority (66.7%) reported minimal burden, while 33.3% experienced mild burden. The only caregiver in the severe depression category reported a

moderate burden. In the GAD-7 categories, caregivers with minimal anxiety were mostly associated with minimal burden (75.0%), with 25.0% experiencing mild burden. Caregivers with mild anxiety had a higher likelihood of reporting mild burden (60.0%), with 30.0% reporting minimal burden, and 10.0% experiencing moderate burden. The sole caregiver in the moderate anxiety category reported mild burden (100.0%).

Table 3.   Variables Associated with ZBI Category

Variables	P-value	Correlation Coefficient
PHQ-9 Category	.004	.508**
GAD-7 Category	.006	.487**

*Correlation   is   significant   with   moderate   strength   of   correlation
**Correlation is significant with moderate strength of correlation

Table 3 presents the associations between the ZBI Category and other variables, specifically the Patient Health Questionnaire-9 (PHQ-9) Category and the Generalized Anxiety Disorder-7 (GAD-7) Category. The PHQ-9 Category shows a moderate positive strength correlation with the ZBI Category, with a coefficient of .508 (p = .004). This medium-strength association implies that increased caregiver burdens are related to higher levels of depression. Similarly, the GAD-7 Category also has a medium-strength positive correlation with the ZBI Category, with a coefficient of .487 (p = .006). This indicates that greater caregiver burdens are associated with higher levels of anxiety.

DISCUSSION

The significance of managing caregiver work burden cannot be understated, as excessive burden can lead to physical and emotional exhaustion, which in turn impacts performance. Excessive workload often results in stress, which manifests physically and mentally. The relationship between work burden and mental health outcomes among elderly caregivers is a critical area of concern. Numerous studies, including the findings presented in this research, highlight the significant impact of caregiver burden on psychological well-being (Aung et al., 2021). Our study further supports these findings by demonstrating a significant positive association between elderly caregivers' work burden and the level of depression. This correlation suggests that as the demands on caregivers increase, so does their risk of experiencing depressive symptoms. Elderly caregivers, especially those responsible for assisting with Activities of Daily Living (ADL), often face immense physical and emotional responsibilities that can span most of the day. The intensity of these tasks, combined with the prolonged nature of caregiving, places caregivers at a heightened risk for depressive symptoms.

The literature consistently shows that caregivers who spend extensive hours, often more than 40 hours per week, providing care are particularly vulnerable to depression. This is not surprising, as caregiving at such an intensive level is akin to a full-time occupation, yet it is frequently carried out in addition to other responsibilities the caregiver may have, leading to significant emotional and physical strain. The relationship between caregiving duration and depressive symptoms can be complex and influenced by various factors, including the level of support caregivers receive, their coping mechanisms, the severity of the care recipient's condition, and the caregiver's own health. While some caregivers may adapt over time, others may experience worsening mental health due to the ongoing demands and responsibilities of caregiving. Caregivers who also bear the burden of providing financial support for the care recipient are more likely to experience depressive symptoms. The financial strain, often resulting from health-related expenses, adds another layer of stress, making it more challenging for caregivers to maintain their mental health (Committee on Family Caregiving for Older Adults, 2016; Gagliardi et al., 2022; Liu, Hughes, & Wang, 2024).

Anxiety, another critical mental health outcome, is also closely linked to elderly caregiver burden. Our research found a significant positive association between elderly caregivers' work burden and the level of anxiety. Caregivers often experience high levels of anxiety due to the unpredictable and demanding nature of their responsibilities. The anxiety may stem from concerns about the care recipient's health, the caregiver's ability to provide adequate care, and the potential consequences of failing to meet these responsibilities. The cultural expectations placed on caregivers, particularly women, can further heighten anxiety, as they may feel an even greater pressure to fulfil their caregiving roles successfully. Gender differences are evident, with female caregivers generally more susceptible to anxiety than their male counterparts, likely due to the added societal expectations and the emotional nature of caregiving (Bueno & Chase, 2023; Hwang & Hodgson, 2021).

Fatigue, health status, and the need for support are closely related to symptoms of anxiety in elderly caregivers. Caregivers often take on multiple roles in supporting elderly patients, such as feeding, bathing, assisting with exercises, making treatment decisions, and communicating with the nursing team. These responsibilities can disrupt their daily activities, leading to altered sleep patterns, physical exhaustion, and other health issues, which can heighten anxiety levels. Studies have shown that the stress of caregiving significantly impacts caregivers' psychological well-being, with anxiety being a common outcome. Additionally, when caregivers do not receive sufficient updates about the elderly patient's condition, their anxiety can increase due to uncertainty and a lack of information (Abdi et al., 2019; Chen et al., 2021; Blok et al., 2023).

In summary, our study indicates that caregivers who perceive a minimal work burden generally experience lower levels of anxiety and depression. This suggests that maintaining manageable caregiving responsibilities may contribute to better emotional well-being. However, it is important to acknowledge the presence of a few respondents who reported severe emotional distress despite varying caregiving burdens. These cases highlight the need for further investigation to understand additional contributing factors, such as personal resilience, social support, and coping mechanisms. Furthermore, the use of a self-rating questionnaire as the primary instrument, while efficient for collecting data, limits the precision in measuring the actual work burden or stress levels experienced, which are based on subjective perceptions rather than objective assessments. Future research also should explore these aspects to develop targeted interventions that support caregivers at risk of significant emotional distress (High, 2014).

CONCLUSION

This study highlights the significant impact of caregiver work burden on mental health, particularly in relation to depression and anxiety among elderly caregivers. A positive association was found between increased work burden and higher levels of depressive symptoms and anxiety. Caregivers responsible for intensive tasks are at heightened risk for mental health issues. Our findings highlight the urgent need for support systems to reduce caregiver burden and improve their mental well-being. Future research should employ longitudinal designs and broader mental health assessments to better understand and address these challenges.

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