

Original Research Article

Analysis of Socioeconomic Factors with the Incidence of Caregiver Burden in Families with Chronic Diseases

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Abstract: The increase in chronic diseases is reported to be the most common cause of death worldwide. This disease usually persists for a long period of time and duration with slow progression. The impact of chronic diseases is not only related to the socio-economic conditions of the patient, but also the family as the main caregiver for the patient. Families with low socio-economic status are vulnerable to chronic diseases due to high costs of care, job changes and decreased income, these conditions ultimately cause caregiver burden in families. This study aims to analyze socio-economic factors with the incidence of caregiver burden in families with chronic diseases. A cross sectional study was conducted among 120 family caregivers of patient with chronic illness purposively selected in Malang Regency, East Java, Indonesia. Data were gathered between June-November 2023 using *Google form*. 4 questionnaire were performed. Descriptive statistic were used to summarize the data in frequencies and percentage. Linear regression analysis were used to examine correlations among variables. The majority of respondents were female (73.3%) with a patient care span of >1 year (55%), 53.3% reported having health insurance. The results of simultaneous regression analysis obtained significant data on the influence of the two independent variables in the form of social support and economic status on the incidence of caregiver burden (p value <0.05) with an R2 value of 75%. These results indicate that good social support and socioeconomic status can help reduce the burden of care on the family.

Keywords: Chronic Disease, Caregiver Burden, Family, Social Support, Economic Status.

INTRODUCTION

Non-communicable diseases or commonly called chronic diseases, are diseases that cannot be transmitted from one person to another. These diseases usually persist for a long duration with slow development (World Health Organization, 2022). Chronic diseases continue to increase and are reported to be the most common cause of death worldwide. These diseases are mainly cardiovascular diseases, cancer, chronic respiratory diseases and diabetes (Yigitalp & Gumus, 2017).

These diseases are the leading causes of death worldwide, and they impose enormous costs that go beyond health, trapping people in poverty, preventing communities from living well, weakening labor productivity, and threatening economic prosperity. Chronic diseases are also a problem that threatens disparities in opportunity, wealth, and power in large numbers (World Health Organization, 2018). Most health problems will trigger disruption to the patient's quality of life. However, in reality, the occurrence of chronic diseases in individuals also affects the quality of life of people who are closely connected to the patient, namely the family (Golics *et al.*, 2013).

Illness is a source of great stress and involves the whole family; not just the patient. Adaptation to a new health condition is a complex process and depends on several factors, such as: the illness itself and its characteristics (acute, chronic, severe or not), whether the family has functioned in the past and various factors related to the family members and the surrounding environment (Kalandari *et al.*, 2023).

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The impact of chronic illness is not only related to emotional, social conditions, and changes in roles for both partners and children. However, there are other impacts from an economic perspective. In conditions of chronic illness, especially those that occur in family members who usually earn a living, there will be very significant changes to the lives of other family members (Golics *et al.*, 2013). One of the biggest burdens for family members of patients includes the financial costs borne by the family. This includes the cost of treatment, transportation to check-ups and treatment appointments, and adjustments to the home environment (Golics *et al.*, 2013).

The burden of chronic disease primarily impacts income and depletes individual and household investment savings. Typically, the direct economic impact on households arises in the form of hospital bills, caregiver benefits, and other aspects of care. Indirect costs represent lost work hours due to morbidity/mortality arising from the disease (Okediji *et al.*, 2017).

Social support in families with chronic illness can also have an impact on family members. Family, friends, and neighbors can increase the social support felt by family caregivers, influencing their daily lives through cohesion, open communication, and creating a positive environment (Choi *et al.*, 2016). Theoretical relationships between social support, health, and well-being, empirical evidence suggests that the ability to rely on social support networks in times of difficulty contributes to overall health; on the other hand, when people perceive a lack of support or a diminished social support network, they may become emotionally unstable and pessimistic. (Akbari *et al.*, 2018). This study aims to determine the social and economic support factors in the incidence of caregiver burden in families with chronic diseases.

METHODS

This study is a quantitative correlational study with a cross-sectional approach. Sampling was carried out in Malang Regency, East Java, Indonesia, using a Google form in June-November 2023. Sampling used a purposive sampling technique. The inclusion criteria in this study were families who had members with chronic diseases for at least 6 months, and were at least 20 years old. This study used a questionnaire as a research instrument consisting of 4 questionnaires, namely 1) demographic characteristics of respondents; 2) a questionnaire to measure care giver burden adapted from the Burden scale family caregiver consisting of 25 questions, 3) a multidimensional scale of Perceived Social Support consisting of 10 question items used to measure social support, and 4) a modification of the family health scale questionnaire to measure the family's socioeconomic class. Statistical analysis using SPSS version 25 to analyze the frequency of respondents' demographic data and regression analysis of the relationship between each factor of social support and socioeconomic class to the incidence of care giver burden in respondents.

RESULT

Tabel 1: Caregivers demographic characteristics

Characteristics	n	Frequence (%)
Gender		
Male	32	26.7
Female	88	73.3
Age (years)		
21-25 tahun	38	31.7
26-30 tahun	44	36.7
31-35 tahun	24	20
>35 tahun	14	11.7
Educational		
High school	24	20
College	64	53.3
Postgrduate	32	26.7
Occupational		
Unemployed	12	10
Entrepreneur	68	55
Private sector	22	18.3
Civil servant	20	16.7
Hospitalization time		
6 months-1 years	54	45
>1 years	66	55
Health service usually used		
Primary Health Sevice	50	42
Hospital	70	58

Characteristics	n	Frequence (%)
Monthly Income (IDR)		
<500 thousand	16	13.3
500 thousand-1million	52	43.3
1-2 million	32	26.7
>2 million	20	18.7
Health insurance		
Social health insurance (BPJS)	64	53.3
Non	54	46.7

120 respondents participated in this study. Table 1 shows the characteristics of the study respondents, where the majority of respondents were female (73.3%), with an age range of 26-30 years (36.7%). The majority of respondents had a monthly income range of 500 thousand-1 million rupiah (43.3%), with a family member's treatment time of more than 1 year of 55%. 70 respondents stated that their family members received treatment in hospitals compared to treatment in Primary Health Care (42%). This study also examined the ownership of BPJS health insurance (53.3%) which is a health insurance managed directly by the Indonesian government.

Table 2: Analysis of Socioeconomic Factors with the Incidence of Caregiver Burden in Families with Chronic Diseases

Variable	B	S.E	Sig	t	F	R ²	Sign
Social support	0.133	0.103	0.201	1.287	4.760	0.75	0.010
Economic status	0.259	0.101	0.011	2.571			

The results of the analysis of socio-economic factors in this study showed a significance value of p value <0.05 with an F value = 4.760 (F > F table). So it can be concluded that social and socio-economic support simultaneously affect the incidence of caregiver burden in respondents with family members who have chronic diseases by 75% (R² = 0.75). In addition to the simultaneous relationship between the two independent variables, table 2 also shows the results of the analysis of the relationship of each independent variable to its dependent variable. In the social support variable, the significance value and t count were 0.201; 1.287, which means that emotional support partially has no effect on the incidence of caregiver burden in respondents. While in the socio-economic variable, a significance value of 0.011 was obtained (t = 2.571 > t table), so it can be seen that partially socio-economics has a significant influence on the incidence of caregiver burden in respondents in this study.

DISCUSSION

Chronic illness is a lifelong, ongoing condition that requires ongoing treatment, regular monitoring, support and maintenance to maximize individual function. In addition to causing changes in several aspects of a patient's life, chronic illness also brings different responsibilities and burdens for people who carry out care at home or in a hospital setting (Yigitalp & Gumus, 2017). Chronic diseases are now becoming common due to significant lifestyle changes. The implications of the increase in chronic diseases are increasing annual medical costs and significant morbidity and mortality rates in both low and high income countries (Okediji *et al.*, 2017).

Chronic diseases are conditions that require lifelong support, protection, regular monitoring, and ongoing treatment (Yigitalp & Gumus, 2017). This condition not only has an impact on the condition of the patient, but also the family as the primary caregiver or caregivers. The results of the study showed that respondents with family members with chronic diseases in this study were mostly female (73.3%) with an age range of 26-30 years (36.7%). The majority of family caregivers are women and historically their caregiving role has been seen as an extension of their role as a wife or mother (Bulls, 2001). Worldwide, women are the primary informal caregivers for families with chronic illness or disability. Family caregiving remains a largely feminine activity, despite the fact that with demographic changes and changes in social structures and norms, men are increasingly taking on roles in the caregiving process (Sharma *et al.*, 2016).

The majority of respondents in this study were self-employed with an income range of 500,000-1 million rupiah (55%; 43.3%). In several previous studies, it was found that financial status, employment, and supporting resources affect the way families care for patients with chronic diseases (Adib-Hajbaghery & Ahmadi, 2019a).

Demographic data on insurance ownership shows that half of all respondents (53.3%) in this study have health insurance that can help cover the cost of treating sick family members. In previous studies, data was obtained that 76% of 313 patients with a medical diagnosis of type II DM did not have health insurance (Al-Sanaani *et al.*, 2022). Research shows that lack of insurance, gaps in insurance coverage, or under-insurance are associated with limited access to services, unmet health care needs, and difficulties accessing medications, (Huguet *et al.*, 2023).

Chronic illness is also related to income and socioeconomic status, which in turn impacts the incidence of caregiver burden on family members. Families with low incomes are at greatest risk of being affected by chronic illness and also premature death because they are more vulnerable. Chronic illness and disability also impact the economic stability of families by bringing adverse economic consequences, such as unemployment, changes in employment status, and several medical costs (Jayathilaka *et al.*, 2020).

The results of this study indicate that the economic status of respondents as caregivers of families with chronic diseases is significantly related to the incidence of caregivers (p value <0.05). This is in line with previous studies showing that low economic status is a risk factor for caregiver burden and reduces the quality of life of caregivers (Adib-Hajbaghery & Ahmadi, 2019b).

Social support is usually defined as social resources perceived to be available from the environment or non-professional support groups to an individual in the form of formal and informal assistance (Yang *et al.*, 2022). In previous research involving social support for caregivers and the elderly with chronic diseases, it was found that social support from family and friends for caregivers had a significant effect on HRQOL values, not only for caregivers but also on the quality of life of the elderly who received care (De Maria *et al.*, 2020). This result is in contrast to this study, where partial analysis of the social support variable on caregiver burden did not show significant results (p value >0.05).

Social support is a factor that is generally associated with psychological well-being and growth. Social support is often defined as the availability of people who can be relied on for care and affection. The various types of social support include emotional support, which involves the love, empathy, and concern of others (Gise & Cohen, 2022).

Although the partial analysis results on the social support variable did not show significant values, but simultaneously this study showed a significant relationship between social support factors and economic status with the incidence of caregiver burden (0.010; 4.760) of 75%. This result is in line with other studies where low monthly income is not a direct risk factor for caregiver burden, but when involving the variables of family financial status, education, social support, and caregiver employment simultaneously, it has an influence not only on the quality of life and mental health but also the burden of caregiving that they feel. (Jayathilaka *et al.*, 2020). In a review it was stated that social support, financial resources, coping styles and strategies were related to the level of caregiving burden. (Lai, 2012).

CONCLUSION

Simultaneous analysis of social support and economic status variables on caregiver burden incidence showed significant results. Therefore, the conclusion of this study can help nurses and other health care professionals to understand the factors that influence caregiver burden, considering that the family is the main caregiver for patients with chronic diseases.

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