ORIGINAL ARTICLE

Family Support in Non-Communicable Disease Management and its Impact on the Quality of Life among the Elderly in Urban Service Area of a Tertiary Care Facility: A Descriptive Cross-Sectional Study

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ABSTRACT

Non-communicable diseases (NCDs) are a growing burden among India's elderly, particularly in Tamil Nadu. Family support plays a critical role in disease management and quality of life (QOL), though regional data remain limited. A cross-sectional study was conducted among 266 elderly patients attending an Urban Health Training Center NCD clinic, selected by simple random sampling. QOL was assessed using WHOQOL-BREF (Physical, Psychological, Social, Environmental domains), and family support was measured using the Multidimensional Scale of Perceived Social Support (family subscale). Data were analyzed using SPSS. Participants were predominantly 60–70 years (80.1%) and female (59.4%). Single NCD was reported by 56.4%, while 43.6% had multimorbidity. Family support was high in 57%, moderate in 26%, and low in 15%. Practical support for medication, diet, and physical activity was limited. Family support correlated significantly with all QOL domains (P<0.001). Higher support was associated with better scores in environment (53.8%), psychological (48%), social relationships (34.4%), and physical health (32.4%). Family support is strongly associated with improved QOL across all domains among elderly with NCDs in urban Tamil Nadu. Incorporating family-centered interventions into NCD programs could enhance outcomes and well-being in this population.

KEY WORDS: Family support, Non-communicable diseases, Quality of life

Introduction

Non-communicable diseases (NCDs) such as diabetes, hypertension, cardiovascular diseases, and chronic respiratory disorders are major contributors to morbidity and mortality worldwide, accounting for 74% of deaths[1]. In India, NCDs are responsible for over 65% of deaths, reflecting an epidemiological transition driven by urbanization, lifestyle changes, and population ageing[2]. Risk factors increase with age, with the highest prevalence seen in individuals aged 60 years and above[3].

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In Tamil Nadu, NCDs contribute to nearly 75% of all deaths. The Tamil Nadu STEPS Survey (2020) reported a hypertension prevalence of 33.9% and diabetes prevalence of 17.6% among adults[4]. India, home to the world's second-largest elderly population, is projected to see its proportion of older persons rise from 8% in 2015 to 19% by 2050[5]. Ageing often brings poverty, widowhood, social isolation, reduced family support, and dependency[6].

The family serves as the primary unit of care, providing emotional, social, and financial support, which significantly influences disease management and treatment adherence[7, 8]. Strong family support is associated with better quality of life (QOL), while its absence worsens outcomes, particularly in multimorbidity[9-11]. Observational studies confirm that enhanced family support correlates with improved management and well-being[12]. Given the limited

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evidence from Tamil Nadu, this study assesses family support and its relationship with QOL among elderly NCD patients in an urban tertiary care setting.

Materials And Methods

Study Design

- This was a descriptive cross-sectional study.

Study Setting

- The study was carried out in the Urban Health Training Centre (UHTC), the urban field practice area of a tertiary care hospital.
- The study period extended from October 2024 to February 2025.

Study Participants

- Elderly patients registered under the Non-Communicable Disease (NCD) clinic at the UHTC were included in the study.

Sample Size

- The sample size was calculated to estimate the proportion of elderly individuals receiving strong family support in the management of NCDs.
- Based on a previous study reporting a prevalence of 22.2% of strong family support, with a 95% confidence level and an absolute precision of 5%, the required sample size was calculated as 266 using the standard single population proportion formula[13].

Sampling Technique

- A list of eligible elderly patients was obtained from the NCD clinic register.
- Participants were selected using a simple random sampling technique.
- A total of 266 participants were included in the study.

Data collection procedure

Data collection was carried out after obtaining the clearance from the Institutional Ethics Committee (IEC No:486(08)2024). Prior to starting data collection, a one-day training session was conducted for postgraduate students, CRMI, and MSW personnel posted at the Urban Health Training Centre. The training focused on data collection procedures using the questionnaire and its translation into the local language. A structured, validated study tool was employed to collect data on socio-demographic characteristics (age, gender, education, socioeconomic status, and employment status), health status (type and duration of NCDs), family support (assessed using the Multidimensional Scale of Perceived Social Support)[14] and Quality of life (assessed using the WHOQOL-BREF)[15].

The Multidimensional Scale of Perceived Social Support (MSPSS), a 12-item questionnaire, was used to assess perceived social support from three sources: family, friends, and a significant other. For this study, only the family subscale - comprising items 3, 4, 8, and 11 was considered (Family Subscale: Sum across items then divide by 4). Based on standard scoring guidelines, perceived social support was categorized as low (1–2.9), moderate (3–5), or high (5.1–7)[14].

Quality of life (QOL) was assessed using the WHOQOL-BREF, and raw scores were calculated for four domains: Physical Health (7 items), Psychological (6 items), Social Relationships (3 items), and Environment (8 items). Responses to the 26-item questionnaire, rated on a 5-point Likert scale, were summed per domain after reversing negatively phrased items (Q3, Q4, Q26). All items in each domain had mean scores multiplied by 4 to give a "domain raw score" (4–20) to maintain consistency with WHOQOL-100. To generate a 0-100 scale, these domain raw scores were linearly transformed according to the following formula: Domain score = (raw score − 4) × (100/16), higher domain scores indicate better quality of life and lower domain scores indicate poorer QOL.

Based on prior literature, individual domain QOL profiles were classified as low (≤45), moderate (45–65), or high (>65). Additionally, two standalone items (Q1 and Q2) were asked about general quality of life and health satisfaction, and rated separately on a 1-5 scale[15].

Data analysis

The collected data were entered into Microsoft Excel and subsequently analyzed using IBM SPSS Statistics version 29.0. The categorical variables expressed in frequency and percentage. Chi square was applied to find the association between family support and QOL.

Results

The baseline characteristics of the study participants are presented in [Table. 1]. The level of family support among the study participants (shown in [Table. 2]), 154 (57.9%) reported receiving high family support, while 71 (26.7%) experienced moderate support; in contrast, 41 participants (15.4%) reported low family support. [Table. 3] shows the role of family members in providing financial support. For catastrophic expenditures, 13.2% of participants always received financial support from their family, 13.5% often received support, 14.3% sometimes received support, and 23.3% rarely received support, whereas 35.7% never received financial assistance. Regarding health insurance, 19.5% always received family support, 19.9% often received support,

15.4% sometimes received support, and 18.8% rarely received support. However, 26.3% of participants reported never receiving financial support from their family for health insurance.

Table 1: Distribution of study participants based on socio-demographic details (n=266)

Socio-demographic details	Frequency (n = 266)	Percentage (%)
Age group (years)		
60-70	213	80.1
71-80	47	17.7
>80	6	2.3
Gender		
Male	108	40.6
Female	158	59.4
Education status		
No formal education	97	36.5
Primary	89	33.5
Secondary	51	19.2
Higher secondary	14	5.3
Graduate, PG and above	15	5.5
Occupation		
Unemployed	132	49.6
Self employed	73	27.4
Government employee	14	5.3
Private sector employee	11	4.1
Farmer	36	13.6
Socio-economic status *(#according updated modified BG Prasad's class)*		
I (Upper ≥9131)	26	9.8
II (Upper middle 4566-9130)	66	24.8
III (Middle 2739-4565)	38	14.3
IV (Lower middle 1370-2738)	70	26.3
V (Lower <1370)	66	24.8
Chronic conditions *(Diabetes, Hypertension and Cardiovascular diseases)*		
One conditions	150	56.4
More than one conditions	116	43.6

Table 2: Distribution of level of family support by Multidimensional Scale of Perceived Social Support

Level of family support	Frequency (n = 266)	Percentage (%)
High support	154	57.9
Moderate support	71	26.7
Low support	41	15.4

The role of family members in providing emotional support to the participants (shown in [Table. 4]). Overall, 19.2% of participants reported always receiving emotional support from their family, 28.2% often received support, and 19.9% sometimes received support. In contrast, 21.1% rarely felt supported, while 11.7% reported never receiving emotional support from their family.

Table 3: Distribution of study participants based on the role of family members in financial support (n=266)

Role of family members in financial support	Catastrophic expenditure (n = 266) (%)	Health insurance (n = 266) (%)
Always	35 (13.2%)	52 (19.5%)
Often	36 (13.5%)	53 (19.9%)
Sometimes	38 (14.3%)	41 (15.4%)
Rarely	62 (23.3%)	50 (18.8%)
Never	95 (35.7%)	70 (26.3%)

Table 4: Distribution of study participants based on the role of family members on emotional support (n=266)

Role of family members on emotional support	Frequency (n = 266)	Percentage (%)
Always	51	19.2
Often	75	28.2
Sometimes	53	19.9
Rarely	56	21.1
Never	31	11.7

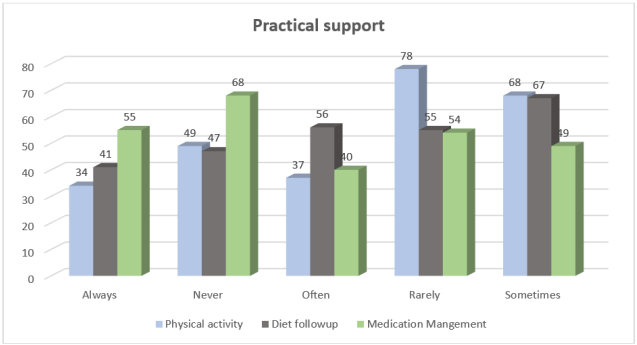


Fig. 1: Distribution of study participants based on the family role in Practical support (n=266)

[Fig. 1] illustrates the role of family members in providing practical support, including assistance with physical activity, dietary adherence, and medication management. Regarding physical activity, 34 participants reported always receiving family support, while the majority (78 participants) indicated that such

support was rarely provided; 68 participants reported receiving support sometimes. For dietary adherence, 41 participants reported always receiving family support, 56 often received support, and 67 sometimes received assistance with diet follow-up. Concerning medication management, only 20.6% of participants reported receiving consistent support from family members, whereas the remaining participants experienced limited or no family support in managing their medications.

Table 5: Association between level of family support and across various domains of QOL – Physical, Psychological, Social relationship and Environment (n=266)

Level of family support	Physical QOL (n, %)			Total (n, %)	P-value
	High quality (Score >65)	Mod quality (Score 46-65)	Poor quality (Score <45)		
High support	50 (32.5)	79 (51.3%)	25 (16.2%)	154 (100%)	
Mod support	12 (16.9%)	40 (56.3%)	19 (26.8%)	71 (100%)	**0.000**
Low support	6 (14.6%)	8 (19.5%)	27 (65.9%)	41 (100%)	
Psychological QOL (n, %)					
High support	74 (48.1%)	49 (31.8%)	31 (20.1%)	154 (100%)	
Mod support	19 (26.8%)	29 (40.8%)	23 (32.4%)	71 (100%)	**0.000**
Low support	5 (12.2%)	10 (24.4%)	26 (63.4%)	41 (100%)	
Social relationship QOL (n, %)					
High support	53 (34.4%)	51 (33.1%)	50 (32.5%)	154 (100%)	
Mod support	7 (9.9%)	20 (28.2%)	44 (62.0%)	71 (100%)	**0.000**
Low support	4 (9.8%)	6 (14.6%)	31 (75.6%)	41 (100%)	
Environment QOL (n, %)					
High support	83 (53.9%)	51 (33.1%)	20 (13.0%)	154 (100%)	
Mod support	17 (23.9%)	34 (47.9%)	20 (28.2%)	71 (100%)	**0.000**
Low support	3 (7.3%)	14 (34.1%)	24 (58.5%)	41 (100%)	

[Table. 5] shows a statistically significant association found between family support and various domains of quality of life - Physical, Psychological, Social Relationship, and Environmental and shows (P-value = 0.000). Participants with high level of family support reported better QOL across all the four domains, 50 (32.4%) had high physical QOL, 74 (48%) high psychological QOL, 53(34.4%) high social relationship QOL, and 83 (53.8%) had high environmental QOL. In contrast, those with low family support had poorer QOL. These findings indicate that better family associated with improved well-being.

Discussion

The present study aimed to assess the impact of family support in the management of NCD among the elderly and its association with their QOL.

A total of 266 elderly participants were included in the study. The majority (80.1%) were aged 60-70 years and 59.4% were female. Nearly 36.5% had no formal education and 49.6% were unemployed. Most of the participants (56.4%) had one NCD, while 43.6% had multiple chronic conditions.

Our findings highlight that a significant proportion of participants 57.9%, 26.7% & 15.4% received high, moderate and low family support respectively. The study done by Samanta T have been observed that family members encourage the elderly people to engage in household chores, family can support them perform exercise which helps them remain fit, a protective factor of chronic diseases. Thus, family support and care play a major role in older people leading a healthy life in India[17].

The study conducted in North Delhi reported that the lives of the elderly often depend on the support they receive from their family, which is typically serve as their primary source of social and emotional support. Family support was found to be strongly associated with a better quality of life among the elderly[18]. Similarly, a study by Dongre and Deshmukh[19] showed that elderly people who had good family support, were involved in decision-making, and were not neglected by their families had higher average scores in psychological, social, and environmental well-being. In the present study, 19.2% of participants reported always receiving emotional support from their families. However, 21.1% and 11.7% reported rarely and never receiving emotional support, respectively, the lack of emotional support may contribute to poorer health outcomes and challenges in managing chronic conditions. A study conducted in Chennai in 2023 found that 84.2% of elderly people living in old age homes were affected by depression, suggesting that strong family support may help protect against the mental health issues often associated with non-communicable diseases[20].

In this study found family members support the participants always in related to practical support like physical activity, diet and medication were 12.7%, 15.4% & 20.6% respectively. The remaining participants gets practical support from family may be sometimes or rarely or never. Many studies have shown that a significant number of older adults don't get enough of practical support from their families to stay active, eat healthy, or take their medications regularly[21].

This study revealed a statistically significant association between family support and all four domains of QOL -

physical, psychological, social, and environmental (P < 0.001). Participants who received strong support from their families consistently reported better quality of life. For instance, 32.4% had good physical well-being, 48% had better psychological health, 34.4% had stronger social relationships, and 53.8% experienced a more supportive environment. On the other hand, those with low family support tended to have poorer outcomes in these areas, highlighting the crucial role of family in promoting overall well-being among the elderly. The study done by Krishnappa L in urban Bangalore found that older people tend to have better when they financially secure and have a good social support system[5]. Another study conducted in Kottayam has shown that urban older populations have better QOL in all domains excepting the social domain[22]. In contrast, Rajasi *et al*. found that elderly with poor family support, particularly those experiencing neglect or lacking visits from relatives, had significantly lower QOL, especially in the psychological and social domains[23]. According to Sheilini M, family support significantly improves medication adherence in elderly patients with chronic diseases, leading to better quality of life[7]. Many studies have pointed out different things that affect quality of life, but our study shows that family support stands out as a major factor in the well-being of older adults.

Strengths and limitations:

This study used standard tools (MSPSS and WHOQOL-BREF) to accurately measure family support and quality of life. It explored different types of family support—financial, emotional, and practical—giving a clear idea of how families help elderly members. The research focused on an important but less-studied topic in Tamil Nadu, offering helpful insights for improving elderly care in urban areas. The limitation of the study was that it was a cross-sectional study, which shows only an association between family support and quality of life. Also, the study was done in urban area, so the findings might not reflect what happens in rural or other settings. Another limitation is that the study didn't follow participants over time, so it doesn't show how family support or quality of life might improve or decline in the long term.

Conclusion

This study found that family support plays a vital role in the management of non-communicable diseases among the elderly. Over half of the participants reported receiving high levels of support from their families, which was associated with better outcomes across all domains of quality of life. These findings underline the importance of involving families in elderly care to promote better health and well-being in urban settings.

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