Family support and quality of life among urban elderly people: A cross-sectional study in Dhaka, Bangladesh

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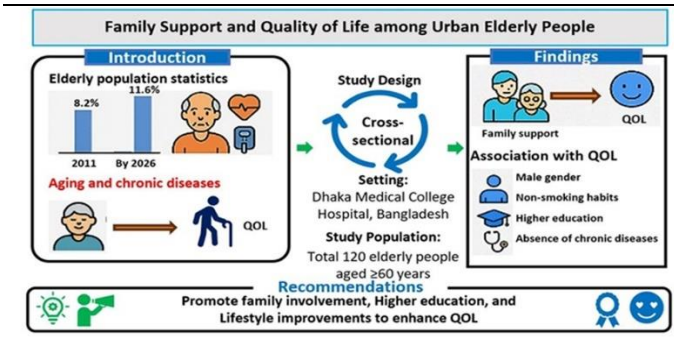
ABSTRACT

In Bangladesh, the elderly population is expected to rise from 8.2% in 2011 to 11.6% in 2026, which is associated with an increasing burden of chronic diseases that negatively affect the quality of life of the elderly. Previous research on the quality of life (QOL) of the elderly in Bangladesh has given limited focus on the elderly in urban settings within a healthcare setting and the impact of family support. This study aimed to examine the relationship between family support and quality of life among urban elderly people in Bangladesh. A hospital-based cross-sectional study was done among elderly attendants of Dhaka Medical College Hospital with convenience sampling. Data collection was done using a structured questionnaire consisting of socio-demographic data, Family Support Scale (FSS) and WHOQOL-BREF Scale. Statistical analyses, such as independent t-tests, Pearson's correlation and ANOVA, were performed. About half of the respondents perceived poor family support, and 46.7% had poor overall QOL. Family support was found to have a significant positive correlation with QOL ($r = 0.754$, $p < 0.01$). Male gender ($p = 0.024$), higher education ($p < 0.01$), absence of chronic disease ($p < 0.01$), non-smoker ($p < 0.01$) and joint family living ($p < 0.01$) were found to be significantly associated with better QOL. These results emphasize the need to strengthen family support and chronic disease management in the city, and suggest that reinforcement of traditional family networks as well as improving access to healthcare may improve the quality of life in the elderly rural populations.

ABSTRAK

Di Bangladesh, proporsi populasi lansia diperkirakan meningkat dari 8,2% pada tahun 2011 menjadi 11,6% pada tahun 2026. Peningkatan ini berkaitan dengan bertambahnya beban penyakit kronis yang berdampak negatif terhadap kualitas hidup lansia. Penelitian terdahulu mengenai kualitas hidup (quality of life/QOL) lansia di Bangladesh masih memberikan perhatian terbatas terhadap lansia yang tinggal di wilayah perkotaan dalam konteks pelayanan kesehatan, serta terhadap dampak dukungan keluarga. Penelitian ini bertujuan untuk menelaah hubungan antara dukungan keluarga dan kualitas hidup pada lansia perkotaan di Bangladesh. Studi potong lintang berbasis rumah sakit dilakukan pada pendamping lansia di Dhaka Medical College Hospital dengan teknik convenience sampling. Pengumpulan data dilakukan menggunakan kuesioner terstruktur yang mencakup data sosiodemografis, Family Support Scale (FSS), dan WHOQOL-BREF Scale. Analisis statistik meliputi uji t independen, korelasi Pearson, dan ANOVA. Sekitar separuh responden mempersepsikan dukungan keluarga yang buruk, dan 46,7% memiliki QOL keseluruhan yang rendah. Dukungan keluarga ditemukan memiliki korelasi positif yang signifikan dengan QOL ($r = 0,754$; $p < 0,01$). Jenis kelamin laki-laki ($p = 0,024$), tingkat pendidikan yang lebih tinggi ($p < 0,01$), tidak adanya penyakit kronis ($p < 0,01$), tidak merokok ($p < 0,01$), serta tinggal dalam keluarga besar/keluarga gabungan ($p < 0,01$) terbukti berasosiasi secara signifikan dengan QOL yang lebih baik. Temuan ini menegaskan perlunya penguatan dukungan keluarga dan pengelolaan penyakit kronis di wilayah perkotaan. Selain itu, hasil penelitian menunjukkan bahwa penguatan jejaring keluarga tradisional serta peningkatan akses terhadap layanan kesehatan berpotensi meningkatkan kualitas hidup pada populasi lansia di wilayah pedesaan.

GRAPHICAL ABSTRACT



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INTRODUCTION

Population ageing is on the rise in all parts of the world and has become a major new challenge in healthcare and social systems (Islam et al., 2020). Advancing age is often associated with declining physical function, rising prevalence of chronic diseases, psychological vulnerability, and low levels of social participation, which together impact QOL of the elderly (Zhang et al., 2025). Being faced with a large number of aged people, particularly in developing countries, like Bangladesh, care and well-being of this section is a growing concern for promoting healthy ageing and avoiding pressure on healthcare facilities (Islam et al., 2020; Jahangir et al., 2025). In Bangladesh, the process of urbanization and changing family patterns has resulted in a gradual change in the traditional forms of care giving, and many older people are at risk of reduced social support and lower well-being (Akter et al., 2025).

The United Nations defines older people as aged 60 or 65 years and above (United Nations, 2020). Globally, the population age 60 years and over is projected to be 1,400 million people by 2030, and is projected to double to 2.1 billion by 2050 (WHO, 2025), and the fastest growth is in developing regions. Bangladesh is also going through the same demographic transition, with the share of the elderly population going from 8.2% (~144 million) in 2011 to 9.28% (~165 million) in 2022 (Bangladesh Bureau of Statistics, 2022). Alongside a huge burden of non-communicable disease (cardiovascular disease, diabetes, high blood pressure and chronic respiratory diseases). These conditions contribute in a significant way to functional limitations, healthcare utilization, and psychological distress of older adults (Bodiuzzaman et al., 2022; Jahangir et al., 2025; Tareque, 2022). A lot of people experience isolation, problems in getting around or with their health, which affects how they feel (Tareque, 2022).

Quality of life (QOL) is defined as the person's perception of his or her position in life in the culture and value systems in which he or she lives and in relation to what he or she values, expects, standards and his or her concerns (WHO, 2012). Determinants of QOL include personal health (physical, mental, and spiritual), relationships, education and social status, autonomy by way of decision making, social belonging, and physical environment (Teoli & Bhardwaj, 2023). Physical health, although the predominant influencing factor, is accompanied by emotional, mental and social factors which contribute to the QoL. Chronic diseases, mobility issues, or decreasing cognitive abilities can all affect one's physical health and reduce QoL (Bikrant et al., 2022). At the same time, mental illnesses such as depression, anxiety and loneliness have a significant impact on the life satisfaction of elderly people (Liu et al., 2023). Social relationships and community activity engagement are also found to contribute to better mental health and QoL (Lima et al., 2020). Physical and mental health are also impacted by the environment, e.g., the security of the area where one resides, which underlines the need for an integrated approach to improving QoL among the elderly (Liu et al., 2023). It has been widely known that according to research, the elderly are characterized with lower QOL than younger populations, and general QOL determinants are reported too (Rizal et al., 2022).

Family support is an important part that can improve the quality of life of the elderly, encompassing emotional, instrumental, and social dimensions. Emotional support, which includes expressions of love, respect, and companionship, instrumental support, which includes assistance with daily activities, and social support, which promotes participation in family and community life (Mayasari et al., 2022; Naing et al., 2020; Wei et al., 2024). Previous research from Asian settings has shown a positive association between family support and health outcomes and satisfaction (Karmacharya et al., 2025; Knodel & Teerawichitchainan, 2017; Wang et al., 2020), but Nurchayati et al. (2019) found no significant relationship between family support and quality of life among hypertension patients in Indonesia. However, urban older populations in Bangladesh are inadequately represented in research (Islam et al., 2020). Most of the studies that have been written focus on the burden of chronic disease, and seldom include research on how family support influences QOL among urban elders, leaving a knowledge gap on the relation between family support and quality of life (Parvin Lasker et al., 2023; Tareque, 2022).

Addressing this evidence gap is of particular importance given the increasing number of elderly people living in urban areas. It is hypothesized that an increase in perceived family support would be positively related to the overall quality of life of urban elderly people. Therefore, the present study aimed to fill the existing gap, focusing on the relationship between family support and quality of life (QOL) of urban elderly people in Bangladesh.

Table 1
Sociodemographic characteristics of participants

Variables	n	%	M ± SD
Age	(Min 60 – Max 86 years)		69.57 ± 6.72
Gender			
Male	83	69.2	
Female	37	30.8	
Marital status			
Married	98	81.7	
Others	22	18.3	
Religion			
Muslim	98	81.7	
Non-Muslim	22	18.3	
Level of education			
No formal education	26	21.7	
Secondary (SSC)	30	25	
Higher Secondary (HSC)	33	27.5	
Graduate and above	31	25.8	
Occupation			
Retired	19	15.8	
Business	25	20.8	
Daily labor	20	16.7	
Others	56	46.7	
Family type			
Nuclear	42	35	
Joint	78	65	
Monthly family income	(Min 5000 – Max 100000 Tk)		23787.5±18001.59
Chronic disease			
Yes	78	65	
No	42	35	
Smoking status			
Yes	38	31.7	
No	82	68.3	

Note: M=Mean; SD=Standard Deviation; Min=Minimum; Max=Maximum; n=Frequency; % =Percent, SSC = Secondary School Certificate, HSC = Higher Secondary Certificate

METHODS

A descriptive cross-sectional research design was applied in this study. This was the design chosen because it is appropriate to investigate the links between family support and QOL within this defined population at one point in time, but its failure to establish causality has now been clearly stated as a limitation. The study was conducted at Dhaka Medical College Hospital (DMCH), which is a major tertiary care hospital, as it is a referral centre for a diverse urban population. This research study was done between December 2023 and June 2024. This setting offered access to elderly people from different socio-economic and residential backgrounds and aimed at reflecting important characteristics of an urban elderly population. A convenient sampling method was applied to select the participants. Nevertheless, the use of convenience sampling may be vulnerable to selection bias, as the healthier/socially better supported elderly may be over-represented.

The study population included individuals aged 60 years or older who were present at DMCH as attendants for patients. The inclusion criteria meant that participants had to be urban residents, willing to participate and meet the age requirement. Participants were excluded if they had severe cognitive impairment and communication difficulties that prevented effective participation in the interview process. The sample size was estimated using G* power (Version 3.1.9.4) analysis to a bivariate normal model (Pearson, two-tailed correlation). Assuming a significance level (α) of 0.05, an expected power of 0.80 ($1–\beta$), and a medium effect size of 0.25 (γ) to detect a meaningful difference or relationship (Faul et al., 2007), the minimum required sample size was 123 participants. Considering feasibility and minimal non-response, 120 participants were included in the study.

The instruments consisted of three sections: (1) socio-demographic characteristics (10 items), (2) Family Support Scale (FSS), and (3) the World Health Organization Quality of Life Questionnaire-Brief version (WHOQOL-BREF). The socio-demographic questionnaire included 10 items: age, gender, marital status, religion, educational qualification, occupation,

Table 2
Distribution of chronic illnesses among study participants

Diseases	Frequency (n)	Percent (%)
HTN	24	31.6
DM	37	48.7
Asthma/COPD	14	18.4
Cardiovascular Disease	42	55.3
Chronic Kidney Disease	17	22.4
Cancer	6	7.9
Osteoporosis	13	17.1

Note: HTN = Hypertension; DM= Diabetes Mellitus; COPD=Chronic Obstructive Pulmonary Diseases; Participants could report more than one chronic condition.

family type, monthly family income (in Bangladeshi Taka), comorbidity, and smoking habit.

The Family Support Scale (FSS) was created by Hanley et al. (1998), and it is a 20-item scale, rated on a 4-point Likert scale (1 = none to 4 = much), that measures perceived family support in an emotional, instrumental and social dimension. Total scores varied between 20 and 80, with high scores reflecting high perceived family support. In the present study, participants were categorized into greater perceived family support and poor perceived family support groups using the sample median score (65) as the cutoff, in the absence of established clinical thresholds (A. Uddin et al., 2019). Scores above the median (>65) were classified as greater perceived family support, while scores equal to or below the median (≤65) were classified as poor perceived family support. The FSS had high reliability with a Cronbach's alpha of 0.901 (A. Uddin et al., 2019).

The WHOQOL-BREF is a 26-item self-report measure for adults that is used to assess self-perceived quality of life. It was developed by the World Health Organisation (The WHOQOL Group, 1994). This instrument consists of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environment (8 items). This includes one item in each of the 24 facets of quality of life, plus two benchmark items from the general facet relating to overall quality of life and general health, which are not used in the scoring. All of these domains were evaluated using a 5-point Likert scale, with varying scale response anchors, where higher values represent higher QoL. The reverse scoring was done for items 3, 4, and 26. The raw scores were computed for each domain and then transformed into a score ranging from 0 to 100 according to the standard procedure defined in the WHOQOL user manual (Cadmus et al., 2021). The mean and median were computed for each domain as well as for the total score. There are no cut-off points above or below which quality of life could be evaluated as "poor" or "good". However, it was decided to classify participants into those who scored less than the median (poor QOL) and those who scored equal to or more than the median (good QOL) (Silva et al., 2014; Singh et al., 2022). The psychometric properties of the WHOQOL-BREF report that the validity and reliability of the scale are generally satisfactory (Gil-Lacruz et al., 2022; Kalfoss et al., 2021; Shawver et al., 2016; Snell et al., 2016). The validity of the Bangla version of the WHOQOL-BREF was assessed using the Classical Test Theory (CTT) (Tsutsumi et al., 2006). M. N. Uddin & Islam (2019) also validated the 26-item WHOQOL-BREF scale in Narail, Bangladesh. The WHOQOL-BREF demonstrated sufficient internal consistency, with Cronbach's α: 0.84 in the physical domain, 0.84 in the psychological domain, 0.62 in the social relationship domain, 0.66 in the environmental domain, and 0.91 for the total score (Tsutsumi et al., 2006).

The questionnaire was first developed in English and then translated into Bangla by a specialist. Then, the Bengali versions were back-translated into English by a bilingual Bangladeshi translator. Finally, both the original versions of the questionnaires and the English versions were evaluated by an English expert

Table 3
Level of perceived family support of participants

Family support	Frequency (n)	Percentage (%)	Median (Range)	M ± SD
Poor perceived	60 (≤ 65)	50	65.5	58.76 ±15.98
Greater perceived	60 (> 65)	50	(Min 24 – Max 80)	

Note: M=Mean; SD=Standard Deviation; Min=Minimum; Max=Maximum

Table 4
Scores (raw) of WHOQOL-BREF items among participants

WHOQOL-BREF Items/Domains	Mean (Raw)	SD
Q1 Overall QOL	3.23	1.09
Q2 General health	3.05	0.92
Domain 1: Physical Health		
Q3 Physical pain	2.99	1.05
Q4 Medical treatment	2.49	1.04
Q10 Energy	3.25	1.18
Q15 Mobility	3.41	1.06
Q16 Sleep	3.43	1.02
Q17 Daily living activities	3.4	1.02
Q18 Working capacity	3.52	1.12
Domain 2: Psychological Health		
Q5 Life enjoyment	3.22	1.23
Q6 Meaningfulness of life	2.98	1.17
Q7 Concentration	2.73	1.11
Q11 Bodily appearance	3.22	1.14
Q19 Self-satisfaction	3.56	1.23
Q26 Negative feelings	4.01	0.96
Domain 3: Social Relationships		
Q20 Personal relationship	3.48	1.08
Q21 Sex life	3.11	1.08
Q22 Social support	2.99	1.02
Domain 4: Environment		
Q8 Day-to-day safety	3.02	1.05
Q9 Physical environment	3.29	1.17
Q12 Financial resources for needs	2.64	1.3
Q13 Daily information	3.2	1.12
Q14 Leisure activities	3.31	1.14
Q23 Home environment	3.1	1.1
Q24 Access to health	2.88	1.05
Q25 Transport facility	2.73	1.13

Note: SD=Standard Deviation

to ensure the equivalence between the two versions. There was no difference between the two versions of the English questionnaire. The researcher then used the Bangla version for the data collection. The researcher did a pilot study on a sample of 20 elderly patients' attendance from the other hospital and ensured that this sample was completely excluded from the main study. Content validity of the questionnaire was ensured by review of three experts of Dhaka Medical College, Dhaka Nursing College, and Universal Medical College, Dhaka, in terms of revision of the questionnaire, keeping in view their feedback with respect to cultural appropriateness. Reliability in terms of Cronbach's alpha was found to be 0.975 for FSS and 0.896 for the WHOQOL-BREF scale, which showed good internal consistency.

All the participants provided written informed consent prior to the beginning of data collection. Data was collected through face-to-face interviews, conducted directly by the principal researcher using the structured Bangla questionnaire. Prior to data collection, the researcher was trained by academic supervisors in interviewing methodology, ethics and ways that would reduce the impact of interviewer bias. The finalized questionnaire was collected and thoroughly reviewed to remove any possibility of incompleteness.

Data processing included coding and inputting into Microsoft Excel, and data analysis with IBM-SPSS version 26.0. Categorical data were reported as percentages, and continuous data were reported as mean and standard deviation for descriptive statistics. Before conducting inferential analyses, data were assessed for key statistical assumptions. The FSS and WHOQOL-BREF Scale are of the Likert type, and the data collected were considered numerical data. Normality of these continuous variables was tested with the help of

Table 5
Scores (transformed) of the WHOQOL-BREF various domains

Domains	Min	Max	M ± SD	Median	Poor QOL	Good QoL
					n (%)	n (%)
Physical Health	7	89	55.30 ± 18.13	57.14	63 (52.5)	57 (47.5)
Psychological Health	13	92	57.15 ± 21.09	62.5	71 (59.2)	49 (40.8)
Social Relationship	8	100	54.86 ± 22.42	58.33	78 (65.0)	42 (35.0)
Environment	9	88	50.52 ± 21.66	53.13	61 (50.8)	59 (49.2)
Overall QOL score	15	86	54.46 ± 18.81	58.59	56 (46.7)	64 (53.3)

Note: M=Mean; SD=Standard Deviation; Min=Minimum; Max=Maximum

histograms, Q-Q plots and the Shapiro-Wilk test. The results indicated that the data for both scales were normally distributed with $p > 0.18$ and $p > 0.11$ for the FSS scale and the WHOQOL-BREF Scale, respectively, i.e. normally distributed results. Based on these findings, parametric tests have been chosen for the analysis. Inferential statistics like independent *t*-tests, Pearson's correlation and Analysis of Variance (ANOVA) were used in exploring the relationships between the study variables. Results were considered to be statistically significant at $p < 0.05$ level.

Ethical approval was obtained from the Institutional Review Board (IRB) of Universal Medical College Review Committee (UMCRC) (Memo No: UMCRC/2024/02/21). Permission for conducting the study was also obtained from the authorities of Dhaka Medical College Hospital. Written informed consent was given by all participants before data was collected after giving a full explanation of the study objectives, procedures, voluntary nature of participation, and the right to withdraw at any time without penalty. All data were collected anonymously, and no personally identifiable information was collected. Confidentiality of the participants was strictly ensured, data was securely stored, and access to data was limited to the research team only. Participants were not compensated in any way (i.e., financially or materially) for participating in the study.

RESULTS

As shown in Table 1, the mean age of the participants was 69.57 years (SD = 6.72; range: 60 to 86 years). The majority of participants were male (69.2%), married (81.7%), and Muslim (81.7%). In terms of educational levels, one fourth of the participants (25.0%) had an education level up to SSC, 27.5% having completed HSC, and another 25.8% being graduates or above. A significant proportion occupational group being "Others" (46.7%), followed by business (20.8%). The average monthly family income was 23,787.5 Taka (SD = ±18,001.59). Most participants lived in joint family (65%), and 65% reported having at least one chronic illness. Additionally, 31.7% of the participants were smokers.

Table 2 shows the distribution of chronic illnesses among the participants, and the most prevalent chronic illness was cardiovascular disease, which was present in 55.3% of the participants. This was followed by diabetes (48.7%), hypertension (31.6%), chronic kidney disease (22.4%), asthma/COPD (18.4%), cancer (7.9%) and osteoporosis (17.1%).

Table 3 displays the distribution of participants perceived level of family support. Half of the participants (50%) reported poor perceived family support, while the other half reported greater perceived family support. The mean score of family support was M (SD) = 58.76 (15.98).

Table 4 shows the mean scores (Raw) of WHOQOL-BREF items. Mean scores for quality of life (QOL), and general health were moderate at 3.23 (SD = 1.09) and 3.05 (SD = 0.92), respectively. Psychological health had the highest mean score (4.01). Physical health had the lowest mean score (2.49). Environment scores were also relatively low, with financial resources for needs receiving particularly poor ratings (2.64).

Table 5 is a summary of the scores in the WHOQOL-BREF domains, with psychological health having the highest mean score (57.15 ± 21.09) and environment having the lowest (50.52 ± 21.66). The average score for Total Quality of Life (QOL) was 54.46 ± 18.81. The highest proportion of good QoL was reported for the Environment domain (49.2%), followed by physical health (47.5%), psychological health (40.8%) and social relationships (35.0%). Congruently, the prevalence of 'Poor' QoL was found most often in the Social Relationships (65.0%), followed by the psychological health (59.2%), the

Table 6
Relationship between socio-demographic factors and quality of life

Variable	Mean ± SD	t/F/r	P values
Age	69.57 ± 6.72	0.024 [r]	0.793
Gender			
Male	41.45 ± 11.97	2.32 [t]	0.024*
Female	34.66 ± 15.88		
Marital status			
Married	40.22 ± 13.70	1.478 [t]	0.142
Others	35.50 ± 12.70		
Religion			
Islam	39.18 ± 13.65	-0.302 [t]	0.763
Other religion	40.15 ± 13.66		
Level of education			
No formal education	31.00 ± 13.91	6.967 [F]	0.000*
Secondary (SSC)	41.09 ± 12.81		
Higher Secondary (HSC)	45.82 ± 12.92		
Graduate or above	37.81 ± 11.11		
Occupation			
Retired	39.99 ± 17.32	1.672 [F]	0.177
Business	42.76 ± 10.43		
Daily labor	33.83 ± 12.62		
Others	39.60 ± 13.52		
Family type			
Nuclear	35.39 ± 14.64	-2.285 [t]	0.000*
Joint	41.49 ± 12.59		
Monthly income	23787.50±18001.59	0.147 [r]	0.108
Chronic disease			
Yes	34.64 ± 13.19	-6.451[t]	0.000*
No	48.11 ± 9.45		
Smoking status			
Yes	28.05 ± 12.37	-7.505[t]	0.000*
No	44.60 ± 10.67		

Note: r= Pearson's correlation, t=Independent t test, F= One way ANOVA; * = significant ($p < 0.05$), SSC = Secondary School Certificate, HSC = Higher Secondary Certificate

physical health (52.5%), and the environment (50.8%). Total good QoL was reported in 53.3%, while the remaining number of participants (46.7%) reported a poor QoL.

Table 6 illustrates that the statistically significant associations between gender, education level, presence of chronic disease, and smoking status and quality of life (QOL). Compared to females, males reported significantly better QOL than females ($t = 2.321$, $p = 0.024$). Participants up to HSC education showed greater QOL scores ($F = 6.967$, $p = 0.000$). Presence of chronic disease was linked to lower QOL ($t = -6.451$, $p = 0.000$), and smokers had poorer QOL compared to non-smokers ($t = -7.505$, $p = 0.000$). No statistically significant associations were found between QOL and age, marital status, religion, occupation, family type and income.

Table 7 shows the correlation of family support and quality of life (QOL). There is a significant positive correlation between family support and quality of life ($r = 0.754$, $p < 0.01$).

Table 8 shows the correlation analyses among the four domains of QOL. Significant positive interrelationships were found between physical health and psychological health ($r = 0.754$), social relationships ($r = 0.664$), and environment ($r = 0.734$). Psychological health also showed a high correlation with social relationship ($r = 0.748$) and environment ($r = 0.806$), whereas social relationship and environment domains showed a high correlation ($r = 0.806$).

DISCUSSION

The present study demonstrates a strong positive association between family support and quality of life, suggesting that family support is an important factor that influences the well-being of the elderly. This finding is consistent with past research in

Table 7
Correlation between family support and quality of life among participants

	M (SD)	Family Support	Quality of Life
1. Family support	58.76 (15.98)	-	
2. Quality of Life	39.36 (13.60)	0.754**	-

Note: M = Mean; SD = Standard Deviation; **. Correlation is significant at the 0.01 level (2-tailed).

South and Southeast Asia. Multiple cross-sectional and review studies report from Nepal, China, and other Asian countries have reported a positive association between the perceived family support to various aspects of QOL, including the physical, emotional and social domains (Dewi et al., 2025; Idris et al., 2025; Karmacharya et al., 2025; Wang et al., 2020). These findings are supportive of the importance of the role of familial networks in collectivist societies, where emotional closeness, sharing of decision-makers and practical assistance are key to ageing well.

However, unlike some previous studies, this study revealed a clear and significant association between family support and QOL, which is contrary to the result of the study by Nurchayati et al. (2019), which showed no significant relationship among hypertensive elderly in Indonesia. This discrepancy may be because of differences in study populations (general elderly vs. patients with specific conditions), cultural and urban-rural contexts, and tools used to measure family support and QOL. Urban elderly in Bangladesh may suffer more from isolation and so be more sensitive to family support.

Notably, almost half of the participants of this study experienced poor family support and poor overall QOL, suggesting that there is a significant proportion of older adults with combined social and well-being vulnerabilities. The present findings are also similar to the study by Shah et al. (2017), which reported no cases of the urban elderly participants having poor QOL, while the majority were classified in the “good” or “excellent” QOL categories. Of the domains, psychological health had the highest mean score, and the environment domain had the lowest. Despite the fact that the psychological domain had the highest average score, social relationships were the most impaired, with the biggest percentage of participants reporting poor QoL in this domain. This pattern may suggest that emotional coping may be relatively preserved despite the possible disadvantages of having a limited array of opportunities for meaningful social connection in the urban environment. Similar trends have been observed in urban environments in other parts of the world, where senior citizens can be socially isolated despite having reasonable environmental conditions (Cadmus et al., 2021; Zin et al., 2020). A similar phenomenon was seen in the Grassi et al. (2020) study in which acceptable psychological well-being was associated with functional and social limitations.

The interrelations between the physical, psychological, social and environmental domains probably reflect the multi-dimensional ways in which family support works through emotional encouragement, assisting with daily activities and also creating safer and resource-rich living environments. This overall impact is similar to the finding of Wardani et al. (2022) who suggested that family support follows mental health and social connectedness. The positive link between physical health and psychological health is consistent with the biopsychosocial model (1979), which highlights the reciprocal effect of physical illness and mental health. Chronic diseases and functional limitations can result in more psychological distress, and poor mental health can result in worse physical outcomes. Similarly, the high correlations between social relationships, psychological health, and the environment underscore

Table 8
Correlations among physical health, psychological health, social relationships, and environment domains of quality of life

	M (SD)	(1)	(2)	(3)	(4)
1. Physical health	55.30 (18.13)	-			
2. Psychological health	57.15 (21.09)	0.754**	-		
3. Social relationships	54.86 (22.42)	0.664**	0.748**	-	
4. Environment	50.52 (21.66)	0.734**	0.806**	0.806**	-

Note: M = Mean; SD = Standard Deviation; **. Correlation is significant at the 0.01 level (2-tailed).

the buffering relationship between social support. Family and community networks can help to reduce stress and improve emotional well-being and can influence perceptions of safety and environmental quality. This study's results agree with previous research (De Maria et al., 2020; Jeong & Kim, 2023), which demonstrated that family and community relationships result in emotional and instrumental support that maintain psychological health and enhance environmental quality perceptions.

Environmental factors were also tightly associated with social relationships, which is consistent with Bronfenbrenner's ecological systems theory (1979), which proposes that individual well-being is influenced by people's interactions with their physical and social environments. Safe neighborhoods, availability of healthcare, and infrastructure that is age-friendly promote social involvement and help sustain interpersonal connections, which help to improve the general QOL of the elderly. Our results are similar to those obtained in urban settings where environmental factors play an important role in social participation and thus the quality of life of the elderly (Cadmus et al., 2021; Zin et al., 2020).

Moreover, this study found that male gender, higher education, non-smoking status, and absence of chronic illness were all significantly associated with better QOL. These findings are consistent with those of Shah et al. (2017), who reported significantly better QOL scores across all four domains among males and higher scores in the physical, psychological, and environmental domains among educated elderly individuals. Global and regional literature, which consistently identifies the status of health and socioeconomic indicators as important predictors in the well-being of elderly people (Knodel & Teerawichitchainan, 2017; Rizal et al., 2022; Wei et al., 2024).

There are several limitations to be noted, (i) convenience sampling from one urban hospital, which raises the issue of selection bias and does not allow for generalization, (ii) cross sectional design so that no inferences to causation can be made, (iii) use of self-reported measures of psychosocial factors which increases the risk of reporting bias, (iv) use of a median split for quality of life which may reduce the precision and power and (v) no multivariable regression to account for confounding, meaning that there may be residual confounding.

The study provides important evidence on the role of family support in shaping the quality of life of urban elderly populations in Bangladesh. In reality, it is necessary for healthcare providers and policymakers to encourage combined models of elderly care that recognize the interdependence of health, social and environmental domains. Enhancing family support mechanisms like career education as well as social welfare programmes, along with urban planning in creating safe and accessible environments, will be the key to improving the quality of life among the rapidly growing elderly population in Bangladesh.

CONCLUSIONS

The results indicate that nearly half of the urban elderly participants felt that they have insufficient family support which was significantly related to lower quality of life (QOL). Greater perceived family support was related to better physical, psychological, social, and environmental well-being. Male gender, higher education, non-smoking status, and absence of chronic disease were additional determinants of higher QOL. These findings illustrate the importance of family support in promoting the well-being of the elderly. Policymakers and healthcare providers should create initiatives that enhance the support networks of families, especially vulnerable groups.

Future research should consider intervention studies that enhance family support and environmental factors to examine their effect on elderly QOL. Investigations comparing urban and rural elderly populations would be helpful to explain contextual differences.

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AUTHORS' CONTRIBUTIONS

Rakibul Hasan designed the study, formulated the concept, acquired the data, performed the field work. Deepayan Mondal reviewed the manuscript, analyzed the data, read and approved the final manuscript. Fardina Rahman Omi designed the study, revised the manuscript, analyzed the data, conducted supervision. Sohel Miah and Bristy Samadder wrote the manuscript and discussed study

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COMPETING INTERESTS
The authors confirm that all of the text, figures, and tables in the submitted manuscript work are original work created by the authors and that there are no competing professional, financial, or personal interests from other parties.

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