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CAREGIVING IN URBAN CONTEXTS: A STUDY OF SOCIO-DEMOGRAPHIC INFLUENCES ON STRESS IN BANGLADESH

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Abstract

This research investigated stress levels in caregivers of children living in urban regions of Bangladesh and analyzed how demographic factors affect stress. A cross-sectional approach was used, focusing on caregivers of children between 0 and 12 years living in large urban areas. The sample comprised 229 caregivers who filled out a Personal Information Form and the Bangla adaptation of the Depression, Anxiety, and Stress Scale (DASS-21). Data were examined through descriptive statistics, Pearson correlation, one-way ANOVA, and multiple regression analysis. Findings showed notable connections between caregiver stress and multiple demographic factors. Greater levels of education were linked to reduced stress levels ($r = -.251$, $p < .01$). Conversely, advanced age ($r = .181$, $p < .01$), a larger number of offspring ($r = -.135$, $p < .05$), and elevated socioeconomic status ($r = .248$, $p < .01$) correlated with heightened stress. ANOVA results indicated substantial differences in stress based on age, education, marital status, number of children, and socioeconomic status. Regression analysis revealed that education, occupation, and socioeconomic status are important indicators of stress. These results underscore the intricate connection between demographic factors and caregiver stress, stressing the necessity for focused interventions in urban Bangladesh.

Keywords: Caregiver stress, Urban caregiving, Socio-demographic factors, & Bangladesh

1. INTRODUCTION

Mental well-being is essential to our overall health, enabling us to navigate life's challenges, develop skills, and contribute positively to our communities. However, the global COVID-19 pandemic has significantly impacted mental health, leading to a substantial increase in anxiety and

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depression disorders. According to the World Health Organization (2022), there has been a notable rise in the number of individuals experiencing symptoms of depression and anxiety worldwide, with depression cases increasing by 28% and anxiety disorders by 25% (Santomauro et al., 2021).

Stress, a key aspect of mental health, is our response to feeling overwhelmed or challenged by various circumstances. It can affect individuals differently, depending on the source and nature of the stress. Stress not only impacts individuals but also extends to caregivers who provide support to those in need. Caregivers are a vulnerable population at risk for mental distress, including anxiety that can surpass even that of the individuals they care for. The stress experienced by caregivers ultimately influences the quality of care provided to children, often due to inadequate preparation, insufficient knowledge about caregiving, financial burdens, and physical and emotional strain (MIND, 2022). A stress-free and confident caregiver can care for children more effectively than one who is overwhelmed and confused.

Caregivers play a critical role in the lives of individuals with special needs, such as children with autism spectrum disorder, chronic disabilities, or attention deficit hyperactivity disorder. These dedicated caregivers often assume additional responsibilities, including providing rehabilitation interventions and physiotherapy. However, their demanding schedules and the challenges they face can lead to mental health issues such as depression, anxiety, and work-related stress, impacting their personal lives, social interactions, and occupational well-being (Dhiman et al., 2020).

Various factors contribute to the mental health challenges faced by caregivers. These include a lack of support from family members, inadequate knowledge of management techniques and healthcare services, communication gaps with healthcare professionals and therapists, financial difficulties, concerns about contagious diseases, and insufficient awareness of safety measures (Dhiman et al., 2020). The burden of caregiving can result in physical symptoms such as headaches, migraines, fatigue, and throat pain due to the demanding nature of their work (Dhiman et al., 2020). High levels of stress and impaired mental health among parents and caregivers can hinder early and effective interventions for children with special needs and other psychiatric conditions. Factors such as language development problems, lack of knowledge about healthcare services and physiotherapy, and difficulty adjusting to new environments contribute to the burden experienced by caregivers (Baykal et al., 2018). The mental health of caregivers significantly influences the well-being of the children they care for, making it a critical public health concern (Meyer et al., 2017).

The experiences and mental health challenges faced by caregivers are not confined to any one region but are a global issue. Studies conducted in diverse contexts, such as rural Ghana, North Macedonia, Kenya's urban informal settlements, and Canada, highlight the unique circumstances and impacts on caregivers' mental well-being. These studies provide valuable insights into the need for developing effective interventions and support systems tailored to the specific needs of caregivers in various regions (Ae-Ngibise et al., 2015; Bajraktarov et al., 2023; Angwenyi et al., 2021; Wister et al., 2022).

For example, a study conducted in Turkey found that high levels of stress, depression, and anxiety among caregivers significantly disrupt their normal and occupational lives. Among caregivers of children with autism spectrum disorder (ASD), severe mental health issues were reported, highlighting the profound impact of caregiving responsibilities (Baykal

et al., 2018). Similarly, a study in Oklahoma City, USA, revealed a deep association between caregivers' anxiety, depression, parenting characteristics, socio-economic conditions, and the severity of the child's illness. The study emphasized the necessity of psychological support and adjustments to improve caregivers' mental health (Malm-Buatsi et al., 2014).

The burden of caregiving is further complicated in contexts like refugee camps, where exposure to violence and gender disparities exacerbate the mental health challenges of caregivers. A study conducted in a Ugandan refugee camp found that caregiver depression was significantly associated with children's depression, illustrating the interconnectedness of caregiver and child mental health (Meyer et al., 2017). In rural Nepal, caregivers of children with neurodevelopmental disorders (NDD) exhibited high levels of psychological distress, with a significant proportion scoring above the threshold for common mental disorders (CMD) (Maridal et al., 2021).

Moreover, studies have shown that the health-related quality of life (HRQOL) of children is often compromised due to the mental health challenges faced by their caregivers. In South India, a significant portion of children had moderately to severely affected HRQOL due to the caregiver's burden (Surender et al., 2016). Caregivers, who are predominantly female and from low-income backgrounds, perform various caregiving tasks that contribute to their mental health challenges (Thrush & Hyder, 2014). Additionally, caregivers of adolescents with cerebral palsy have been found to experience higher levels of depression and stress compared to caregivers of adolescents without disabilities, with several factors influencing their mental health (Power et al., 2019).

These studies underscore the need for comprehensive support systems to address the mental health needs of caregivers, especially during challenging times like the COVID-19 pandemic. By understanding the unique challenges faced by caregivers in different contexts, we can develop interventions that not only enhance their mental health and well-being but also improve the quality of care provided to individuals with special needs or serious mental disorders. This research aims to contribute to the overall enhancement of caregivers' quality of life and the individuals they support.

Research Question: What is the level of stress in the child caregivers among city dwellers of Bangladesh?

Rationale of the study

Caregivers play a vital role in supporting and maintaining children's well-being, but they often face significant challenges that can significantly affect their mental health. The presence of stress in caregivers of children is a serious issue that negatively impacts their quality of life. It is common for individuals to experience mental illness when caring for a sick child, as it can emotionally affect them. Therefore, scientific research on stress among this demographic is crucial as it can help improve the mental well-being of caregivers. Furthermore, studying stress among caregivers of different major cities can provide insights into the effectiveness of interventions. By focusing on this specific population, the study aims to enhance overall mental health outcomes for caregivers and children, ultimately contributing to the creation of healthier and more resilient families in different major cities in Bangladesh. As there is no such study conducted among the caregivers of Bangladesh to assess their stress level, the result of the study will create a positive impact on the community and policy making.

2. OBJECTIVES

2.1. OBJECTIVES

1. To find out the current scenarios of stress among the child caregivers in city dwellers of Bangladesh.
2. To examine the influence of demographic factors such as age, educational background, and marital status etc. on caregiver stress levels.
3. To explore the relationship between caregiver stress and demographic variables such as age, marital status, number of children, etc.
4. To predict educational level (EQ), marital status (MS), occupation (OC), number of children (NC), age of the children (AC), and socioeconomic status of the caregivers (SES) on Stress jointly

3. METHOD

3.1Target Population

This study targets caregivers residing in urban areas of Bangladesh who are responsible for the care of children aged birth to 12 years old, encompassing four developmental stages: infancy, early childhood, middle childhood, and late childhood (Sarafino & Armstrong, 1980). Caregivers include parents (mother or father) as well as other family members such as grandparents or older siblings. Inclusion criteria involve caregivers of both healthy children and those with short or long-term limitations due to illness, disability, or injury. Exclusion criteria encompass caregivers of children outside the specified age range or residing in rural areas.

3.2 Sample Size and Sampling Technique

In this study, caregivers of children were selected as a sample and sampling of people from different major cities of Bangladesh. A total of 229 caregivers of children were reached out for this study.

3.3 Research Design

The research study was completed by following a cross-sectional design to find out the level of stress among caregivers of children in different major cities of Bangladesh.

3.4 Research instruments

For data collection, the following instruments were used in this study:

1. Personal Information Form (PIF)

2. Bangla Version of Depression, Anxiety, Stress Scale (DASS 21)

DASS-21 was developed by Lovibond and Lovibond (1995). This version of DASS is a valid 1 set of 3 self-report scales with 21 items, which was designed to measure the negative emotional states of depression, anxiety, and stress. Each item, on a 4-point Likert scale, indicates the frequency or severity of the participant's experience in the past week to emphasize states rather than traits. These scores range from 0, meaning the client thinks the item does not apply to him or her at all, to 3, meaning the client thinks the item applies to him or her a lot or most of the time, with items 1 and 2 falling somewhere in between.

Additionally, the instructions emphasize that there are no right or wrong answers. There are 7 questions in each subscale. The sum of the scores for each of the 7 questions completed by each participant on each of the 4 subscales is evaluated according to the severity index. The Bangla DASS-21 was adapted and the Cronbach's alpha coefficients for the depression, anxiety and stress scales were 0.987, 0.957 and 0.964 respectively (Alim et al., 2014). As this study focuses on measuring the stress level of the caregivers of children, we only measured the stress by measuring 1, 6, 8, 11, 12, 14, and 18 items of Bangla DASS-21 and it showed good reliability and Cronbach's alpha was 0.791 (Morshed, Ahmed, & Naz, 2024).

3.5 Procedure

At the beginning of the data collection, permission was taken and a rapport was built up with the caregivers of the children. Then the participants were informed about the purpose of the study and were also informed of the risks, benefits, and privacy issues. Next, participants were asked to complete a questionnaire containing a personal information form and a Bangla version of Stress scale (from DASS-21 scale) after reading the questionnaire instructions. They were asked to complete it as soon as possible without wasting time. Afterwards, upon completion of the questionnaire, participants were thanked for their cooperation in the research.

4. RESULTS

The main objective of the study was to see the state of stress experiencing by the caregivers of children. Data collected was organized and subjected to statistical analysis. The suitable statistical techniques, as follows: descriptive statistics such as mean, SD and correlation were used to examine the association between stress and other demographic variables. Regression and one-way ANOVA was used to see the difference in stress level due to the demographic variables. The analyzed data is presented in the form of tables based on the findings under various headings.

Table 1 Mean and Standard Deviation of demographic variables (i.e., age, educational qualification, marital status, occupation of the caregiver, socioeconomic status of the caregiver).

Variable	Mean	Standard Deviation
Age of the Caregivers	35.28	6.830
Educational Qualification of the Caregiver	5.05	2.394
Marital Status	1.17	.523
Occupation of the Caregiver	2.76	3.294
Number of Children of the Caregiver	1.46	.691
Age of the Children	9.7052	4.84286
Socioeconomic Status of the Caregiver	2.85	.482
Stress	24.38	7.871

Descriptive statistics of all the demographic variables was measured, representing the mean, and standard deviation of the age, educational background, Marital Status, Occupation of the caregiver, number of children of the caregiver, age of the children, Socioeconomic Status, and stress (Table 1).

Table 2 Pearson Correlation among the caregivers of the children according to their age (Age), educational qualification (EQ), marital status (MS), occupation of the caregiver (OC), number of children (NC), age of the children (AC), socioeconomic status (SES), and stress

Variable	1	2	3	4	5	6	7	8
1. Age	1							
2. EQ	-.157*	1						
3. MS	-.109	-.045	1					
4. OC	.057	.017	.248**	1				
5. NC	.136*	.185**	-.061	-.006	1			
6. AC	.459**	-.245**	.035	-.053	-.157**	1		
7. SES	.344**	-.020	-.038	.024	-.003	.280**	1	
8. Stress	.181**	-.251**	.046	-.121	-.135*	.278**	.248**	1

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Pearson correlation was measured to see if there are any relationships between stress and demographic variables. Table 2 illustrates a significant negative correlation between stress and educational qualifications ($r = -0.251$, $p < .01$), stress and number of the children ($r = -0.135$, $p < .05$); and significant positive correlation between stress and age ($r = .181$, $p < .01$), stress and age of the children ($r = .278$, $p < .01$), and stress and socioeconomic status ($r = .248$, $p < .01$).

Table 3 One-way ANOVA on Stress among the caregivers of the children according to their age (Age), educational qualification (EQ), marital status (MS), occupation of the caregiver (OC), number of the children (NC), age of the children (AC), socioeconomic status (SES).

Variables		Sum of squares	df	Mean Square	F	Sig.
Age	Between groups	4079.563	31	131.599	2.581	<.001
	Within groups	10044.140	197	50.985		
	Total	14123.703	228			
EQ	Between groups	1429.167	9	158.796	2.739	.005
	Within groups	12694.537	219	57.966		
	Total	14123.703	228			
MS	Between groups	414.300	2	207.150	3.415	.035
	Within groups	13709.403	226	60.661		
	Total	14123.703	228			
OC	Between groups	1665.761	17	97.986	1.660	.052
	Within groups	12457.942	211	59.042		
	Total	14123.703	228			
NC	Between groups	929.156	5	185.831	3.141	.009
	Within groups	13194.547	223	59.168		
	Total	14123.703	228			
AC	Between groups	2438.767	29	84.095	1.432	.081
	Within groups	11684.936	199	58.718		

	Total	14123.703	228			
SES	Between groups	880.494	2	440.247	7.513	<.001
	Within groups	13243.209	226	58.598		
	Total	14123.703	228			

One-way between-groups analysis of variance (ANOVA) was used to investigate the impact of age, EQ, MS, OC, NC, AC, SES on stress (Table 3). Table 3 indicates that there was a statistically significant difference at the .05 level in stress for five groups: age ($F = 2.581$, $p < .01$), educational qualifications ($F = 2.739$, $p < .01$), marital status ($F = 3.415$, $p < .05$), number of the children ($F = 3.141$, $p < .01$), and socioeconomic status ($F = 7.513$, $p < .01$).

Table 4. Selected Statistics from Regression of stress level on educational level (EQ), marital status (MS), occupation (OC), number of children (NC), age of the children (AC), and socioeconomic status of the caregivers (SES).

Variables	R	R^2	R^2 Change	P
Predictor Variable: EQ, MS, OC, NC, AC, SES	.415	.173	.173	.001
*Dependent Variable: Stress				

Results of this table indicate that the strongest predictor explained 17.3% variance in stress level. A regression analysis aimed to predict stress based on multiple independent variables (Table 4). The results illustrated that the combined predictor variable comprising EQ, MS, OC, NC, AC, SES explained significantly variance in the dependent variable, stress ($P < .001$).

Table 5. Simple Regression of stress level on educational level (EQ), marital status (MS), occupation (OC), number of children (NC), age of the children (AC), and socioeconomic status of the caregivers (SES).

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	P
(Constant)	15.121	3.908		3.869	.001
Age	.060	.086	.052	.694	.488
EQ	-.612	.212	-.186	-2.892	.004
MS	1.134	.967	.075	1.173	.242
OC	-.328	.153	-.137	-2.147	.033
NC	-.943	.738	-.083	-1.278	.203
AC	.213	.120	.131	1.780	.077
SES	3.200	1.079	.196	2.965	.003

Dependent Variable: Stress

A simple multiple regression analysis was done to predict stress level based on age, EQ, EQ, MS, OC, NC, AC, SES (Table 5). Data revealed that three of the independent variables were statistically significant predictors of stress levels: educational qualifications ($p < .01$), occupation of the caregiver ($p < .05$), and socioeconomic status ($p < .01$).

Table 6. The Overall F-test for Regression of stress level on educational level (EQ), marital status (MS), occupation (OC), number of children (NC), age of the children (AC), and socioeconomic status of the caregivers (SES).

Sum of variations	SS	df	MS	F	P
Regression	2437.063	7	348.152	6.584	.001
Residual	11686.640	221	52.881		

Total	141123.703	228

a. Dependent Variable: Stress
b. Predictors: (Constant), EQ, MS, OC, NC, AC, SES

In above table shows that EQ, MS, OC, NC, AC, and SES are good predictors. This result fits the model. It is also said that ANOVA tells us Age, EQ, MS, NC, and SES are statistically significant.

5. DISCUSSION

The purpose of this study was to examine the levels of stress experienced by child carers in Bangladesh's urban areas, as well as to investigate how various demographic characteristics influence these levels. It specifically attempted to investigate the association between carer stress and age, educational background, marital status, occupation, number of children, children's ages, and socioeconomic situation. Understanding caregivers' stress levels is critical since it affects not just their well-being but also the quality of care they deliver to children. This study adds significantly to the literature by focusing on carers in an urban Bangladeshi setting, revealing demographic characteristics that increase carer stress. These findings can help to guide focused treatments for carers, ultimately improving child welfare and family resilience.

In relation to the stated research objectives, the findings showed that age, educational qualifications, marital status, number of children, and socioeconomic status significantly influence caregiver stress levels. Specifically, higher educational qualifications were associated with lower stress levels, while older age, a greater number of children, and higher socioeconomic status were linked to increased stress. These results align with previous studies that have highlighted the complex interplay between demographic factors and caregiver stress. The findings of this study are consistent with previous research highlighting the significant stress levels among caregivers. For instance, Dhiman et al. (2020) found that caregivers of children with special needs often experience high levels of stress due to demanding schedules and various challenges. Similarly, Baykal et al. (2018) reported that caregivers of children with autism spectrum disorder exhibit elevated levels of stress, depression, and anxiety, impacting their personal and occupational lives.

The significant negative correlation between stress and educational qualifications found in this study aligns with the findings of Meyer et al. (2017), who highlighted that better-educated caregivers often have more resources and coping mechanisms to manage stress. The positive correlation between stress and socioeconomic status suggests that higher socioeconomic status may be associated with greater responsibilities and expectations, contributing to increased stress, which contrasts with the generally expected protective role of higher socioeconomic status found in other contexts (Angwenyi et al., 2021; Wister et al., 2022).

Unexpectedly, the study found a negative correlation between the number of children and stress levels, which diverges from the findings of Thrush and Hyder (2014), who indicated that a higher number of caregiving responsibilities could lead to increased stress. This discrepancy might be due to cultural factors or support systems available in urban Bangladeshi families that were not present in other study contexts. The negative relationship between the number of children and stress levels may be explained by the prevalence of

extended family support in urban Bangladesh, where caregiving obligations are divided among family members, lessening the strain on the individual carer. Furthermore, cultural norms and expectations in Bangladesh may provide psychological comfort and a sense of task fulfilment, thereby lowering stress levels despite the increased number of children.

The outcomes of this study have a number of managerial ramifications. Policymakers and healthcare professionals should provide targeted support programs for carers, focusing on those with lower educational levels and those with higher socioeconomic situations who may suffer additional stressors. Training programs that improve carers' knowledge and abilities can reduce stress, resulting in better care for children. Furthermore, community-based programs that strengthen social support networks might reduce carer stress.

LIMITATION

Sample size is respectable, but it may not accurately reflect Bangladesh's diverse urban populations. After all funding issues may the main limitation in this study.

RECOMENDATIONS

Future research should include longitudinal studies that investigate the causal links between demographic variables and caregiver stress levels. Investigating the influence of cultural norms and support networks in stress management could provide additional insights into the findings. Expanding the study to include rural parts of Bangladesh would provide a more complete picture of caregiver stress in various situations. Additionally, qualitative research could investigate caregivers' actual experiences, giving valuable, contextual data to supplement quantitative findings. Finally, interventions based on these findings should be assessed for their efficacy in lowering caregiver stress, thereby contributing to evidence-based policy and practice improvements.

6. CONCLUSIONS

Stress levels among child caregivers in urban Bangladesh are significantly influenced by various demographic factors, including age, educational qualifications, marital status, number of children, and socioeconomic status. Higher educational qualifications are associated with lower stress, whereas older age, more children, and higher socioeconomic status contribute to elevated stress levels. These findings challenge some conventional assumptions, particularly the expectation that higher socioeconomic status generally protects against stress. The negative correlation between the number of children and stress may reflect the role of extended family support and cultural norms in urban Bangladesh, which help mitigate the burden of caregiving. These insights highlight the necessity of targeted interventions for caregivers, especially those with higher socioeconomic status and greater caregiving responsibilities, who may be more vulnerable to stress. Effective support programs can enhance caregivers' well-being and, consequently, the quality of care provided to children. These interventions are crucial for fostering family resilience and promoting child welfare, making them essential considerations for policymakers and healthcare providers in the region.

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