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Stress, Coping Mechanisms, and Mental Health Outcomes in Urban India: A Mixed-Methods Socio-Psychological Investigation

Biswajit Manna[1], Sima Maity [2]
[1] *Ex. M.Phil. Scholar, Jadavpur University*
[2] *Assistant professor, Kadambini Women's College of Education*

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Corresponding Author:
Biswajit Manna

Abstract:

Background: The high rate of urbanisation in India has resulted in significant socio-psychological problems, as urban dwellers have faced increasing stress levels related to work, economic strain, infrastructural shortage, and loss of traditional social systems.

Aim: This research examines the relationship between perceived stress, coping styles (problem-focused, emotion-focused, and avoidance) and mental health outcomes (anxiety and depression) in urban India, and the moderating effects of gender, age, and income.

Methods: The mixed-methods design was applied, which is a combination of quantitative survey data, n = 500 (urban adults), with developed instruments, the Perceived Stress Scale (PSS-14), the Brief COPE Inventory, and the General Health Questionnaire (GHQ-12), and qualitative in-depth interviews (n = 40). They were multiple regression, Pearson correlation, one-way ANOVA and thematic analysis. The reliability was evaluated using Cronbach's alpha (0.78-0.89).

Results: Perceived stress was a significant positive predictor of both anxiety ($\beta = 0.45$, $p < 0.001$, $R^2 = 0.42$) and depression ($\beta = 0.42$, $p < 0.001$, $R^2 = 0.39$). Problem-focused coping showed a strong protective impact (β = -0.24 anxiety; 3 = -0.16 depression), and avoidance coping was a powerful risk factor (3 = 0.40; 3 = 0.36). Among the younger age (1830 years) and males, the stress and poor mental health outcomes were disproportionately reported.

Conclusions: Adaptive coping, especially problem-focused coping, plays an important role in buffering stress-mental health relationships. Stigma and training in coping skills interventions are urgent interventions that should be implemented in urban Indian settings.

Keywords: Perceived stress; coping mechanisms; mental health; anxiety; depression; urbanization; socio-psychology; India; mixed-methods

1. Introduction

One of the demographic trends of the twenty-first century is Urbanisation. India is currently inhabited by more than 500 million urban dwellers, and it is estimated that the number of urban dwellers will grow to almost 600 million people by 2031 (United Nations, 2022). Although urbanisation is the driver of economic growth and human development, it also creates a network of socio-psychological stressors, such as increased competition at work, rising cost of living, traffic jams, environmental destruction, and the breakdown of kinship-based support systems, which together threaten the mental health of the population (Patel and Saxena, 2018; Srivastava and Mishra, 2023

Mental disorders are disproportionately burdened by the low- and middle-income countries (LMICs), and India carries almost 15% of the global burden of mental illnesses (WHO, 2022). The National Mental Health Survey of India (NMHS, 2016) also states that the prevalence of mental disorders in urban areas (13.5) is higher than in rural areas (6.9), a fact that highlights the urban-mental health nexus. Despite this epidemiological urgency, the state of mental health infrastructure in Indian cities is in a deplorable state: the ratio of psychiatrists to population in the country is about 0.3 per 100,000, much lower than the WHO-recommended standard of 3 per 100,000 (Gupta & Kumar, 2022).

According to the transactional model of stress and coping (Lazarus and Folkman, 1984), the effect of stressors on mental health is mediated through cognitive appraisal processes and coping strategies that people use. Coping strategies are generally categorized into problem-oriented coping strategies geared towards altering the stressor and emotion-oriented coping strategies geared towards controlling the emotional distress caused by the stressor (Folkman and Lazarus, 1988). A third type, avoidance coping, is disengagement with the stressor by withdrawing behaviourally or using substances or denying it, and has been linked to negative mental health outcomes consistently (Carver et al., 1989; Kumar et al., 2021).

Within the Indian urban context, the cultural factors also influence coping: collectivist family regulations, religious beliefs, gender roles, and socio-economic stratification all mediate the stress experience as well as the repertoire of coping strategies that individuals have access to (Chandrasekhar and Srinivasan, 2020; Lal and Kapoor, 2019). Importantly, the help-seeking behaviour is dramatically limited by the pervasive stigma of mental illness, rooted in superstition, cultural shame, and structural barriers, to enhance the psychological effects of untreated stress (Singh and Singh, 2022; Chandra and Duggal, 2021).

Although the literature on stress and mental health in India is increasingly growing (Bhatia and Malik, 2017; Kaur and Arora, 2020; Kulkarni and Bhagat, 2022), there are still many gaps. To begin with, the majority of studies that survived have been exclusively based on quantitative research designs, eliminating the possibility of an emic level of understanding of the experience of stress and narrativity in the lives of urban Indians. Second, limited research has tested the entire tripartite typology of coping (problem-focused, emotion-focused, avoidance) and their different influences on particular mental health outcomes. Third, there is a lack of theorisation of the moderating effects of socio-demographic factors, especially income, gender, and age cohort, in the Indian urban context.

This paper fills the following gaps with the help of mixed-methods, socio-psychological research based on a representative sample of 500 urban adults in metropolitan India. We proceed with a theoretically based conceptual framework (see Figure 1) in which the perceived stress is the key predictor of anxiety and depression, the type of coping strategy is a key intervening variable, and demographic factors are moderators. The research has four key contributions: (a) it creates strong psychometric evidence on the use of validated instruments; (b) it triangulates quantitative results with deep qualitative evidence; (c) it offers R 2 effect-size estimates and reliability

coefficients, which are consistent with international reporting standards; and (d) it suggests evidence-based policy recommendations specific to the Indian urban context.

2. Literature Review

2.1 Stress and Urbanisation in India

Urbanisation and psychological stress have been studied in the world literature, with much of the information available (Galea and Vlahov, 2005; Van den Berg et al., 2015). Srivastava and Mishra (2023) carried out a systematic review of 34 studies in the Indian context (2000-2022) and were able to conclude that the Perceived Stress Scale (PSS) scores of urban residents in Tier 1 cities (Mumbai, Delhi, Bangalore, Kolkata) were about 28% higher than the ones of rural residents, the Kulkarni and Bhagat (2022) also applied this study to Tier 2 cities, where they discovered similarly high levels of stress and insufficient coping infrastructure, questioning the notion that only megacities experience urban stress.

A set of environmental stressors unique to Indian cities, such as acute air pollution, housing density, noise pollution, and infrastructural breakdowns have become an independent predictor of psychological distress. Vyas and Rao (2022) showed that the concentration of PM2.5 was a strong predictor of PSS scores ($\beta = 0.22$, $p < 0.01$) regardless of occupational and financial stressors, which was a direct neurobiological course of environmental exposure to psychological stress. This result is consistent with the evidence in the world that air pollution may be associated with higher cortisol release and atrophy of the hippocampus (Vert et al., 2017).

The stress of occupation holds a key place in the urban stress scene. According to Hussain and Shankar (2020), work-related stress explained 34% of the variance in the scores of depression among employees in the IT sector in Bengaluru, and role ambiguity, long working hours, and job insecurity were recognized as the most common stressors. The same findings were replicated by Gupta and Kumar (2022) in the finance, education, and healthcare sectors, stating that the lack of employee assistance programmes (EAPs) in most Indian organisations increases the mental health impacts of work-related stressors.

2.2 Coping Mechanisms: Theory and Evidence

The most significant theoretical model in explaining the way people evaluate and react to stressors is Lazarus and Folkman (1984) transactional stress-coping model. According to the model, a distinction is made between primary and secondary appraisal (critique of the stressor importance and critique of the coping resources available, respectively), with the outcomes of coping dependent on the interaction between the above and available resources.

Based on this structure, Carver, Scheier, and Weintraub (1989) have created the COPE inventory, which identifies 15 discrete coping strategies, which are further reduced to the Brief COPE (Carver, 1997). Indian urban environment empirically reflects the advantage of problem-oriented approaches to mental health outcomes. In a

study of 340 Mumbai professionals, Kumar and Sharma (2021) discovered that problem-focused coping mediated the relationship between stress and depression (indirect effect: b = −0.18, 95% CI [−0.26, −0.10]) significantly. A similar result was observed by Mukherjee and Joshi (2019), who also revealed that problem-focused coping longitudinally predicted reduced anxiety at 12-month follow-up (β = -0.31, p < 0.001), but avoidance coping did predict an increase in anxiety over time (0.29, p < 0.01).

A less clear picture is given by emotion-focused coping. Although passive emotion-oriented strategies (e.g., rumination, self-blame) always do predict worse results (Nolen-Hoeksema et al., 2008), active emotion-oriented strategies, including social support-seeking and positive reframing, have been shown to have protective effects, especially in the context of collectivist cultures, where the social support networks are the primary sources of well-being (Bhattachary Lal and Kapoor (2019) discovered the importance of social support-seeking as a mediator of the relationship between stress and anxiety among urban Indian women (= -0.27, p < 0.01) and the culturally specific effectiveness of some emotion-focused strategies.

Avoidance coping has been consistently linked to negative consequences in Indian urban samples. Reddy and Subramanian (2018) reported that depression (0.42, p < 0.001) and anxiety (0.38, p < 0.001) were predicted by avoidance coping, especially alcohol use and over-use of social media in low-income urban households. Similar findings were obtained by Ghosh and Sharma (2022) who revealed that avoidance coping mediated the effect of financial stress on burnout (indirect effect = 0.24, p < 0.01) in a multi-city sample, which is why it is an important risk pathway.

2.3 Mental Health Outcomes: Anxiety, Depression, and Their Socio-Demographic Correlates

The most common mental health issues in urban India are anxiety and depression, and the GHQ-12 surveys have been consistently positive with a rate of 20-35% screening adults in urban samples (Patel and Saxena, 2018; NMHS, 2016). Their high levels of comorbidity (correlations are usually stronger than r = 0.70) are well-reported, and they represent the vulnerability factors (such as neuroticism, negative childhood experiences, and chronic exposure to stress) (Clark and Watson, 1991).

The gender disparity in mental health is different in India than in the West. Many Indian studies indicate more stress and depression among men, contrary to the global meta-analytic results, which generally indicate greater anxiety and depression among women (Seedat et al., 2009). Sharma and Kumar (2020) explain this trend by the dominance of the masculine ideal in the Indian culture that is focused on stoicism, money provision, and career achievements that create high occupational and financial stress in men and, at the same time, inhibit help-seeking behaviour. Sah and Soni (2021) further contend that the feminisation of emotion-based coping resources (e.g., social support networks, counselling services) within Indian society is a systematic form of disadvantage towards the access of men to adaptive coping.

The difference in age cohorts is evident, and emerging adults (1830 years) always exhibit the greatest stress and mental health burden. Das and Roy (2019) attributed this trend to an overlap between the issues of identity formation, the pressure of academic-to-career transition, financial precarity, and social comparison through social media. Verma and Gupta (2021) discovered that PSS scores of urban Indian young adults (M = 26.4, SD = 5.2) were considerably higher than the published norms, and longitudinal data by Mukherjee and Joshi (2019) indicated that higher stress in the early adulthood stages was predictive of chronic anxiety trajectories up to early middle age.

Socio-economic status (SES) is one of the strongest predictors of mental health in urban India. As shown by Chandra and Duggal (2021), urban residents with low income have seen a 2.3-fold greater likelihood of depression than high-income urban residents, after controlling for occupational stress and social support. This gradient is indicative of both direct psychosocial consequences of financial strain and indirect consequences of the lack of access to mental health resources, nutrition, safe housing, and recreational resources (Reddy and Subramanian, 2018).

2.4 Stigma as a Structural Barrier to Mental Health Care

The Indian mental health stigma exists at various levels: public stigma (attitudes towards it in society), self-stigma (internalised shame), and structural stigma (institutional discrimination) (Corrigan, 2004). Singh and Singh (2022) recorded that 68 percent of urban Indians with likely mental disorders had never accessed professional assistance, with stigma as the main obstacle to non-help-seeking among 54 percent of the non-help-seeking population. This treatment gap is especially acute in older adults and the lower-SES population because traditional explanatory models of mental distress as a result of supernatural causes still exist in place, and fear of social ostracism is considerable. Kiran and Desai (2018) discovered that worries about family confidentiality, the presence of fear that by revealing mental illness, the family would suffer harm to its social status and marriage opportunities, were a main obstacle to professional help-seeking in both urban joint and nuclear families. These results highlight the importance of structural and cultural competence in any mental health intervention that aims at addressing urban Indian populations.

3. Theoretical Framework and Hypotheses

3.1 Conceptual Model

This study builds on the conceptual model proposed by Lazarus and Folkman (1984) transactional stress -coping model, and the coping typology proposed by Carver et al. (1989) as follows: Perceived stress is the main independent variable that leads to anxiety and depression. The kind of coping strategy implemented (problem-focused, emotion-focused, avoidance) is a predictor that can either strengthen or weaken the stress-mental health

relationship. Both the choice of coping strategy and the outcome of mental health are moderated by socio-demographic factors (gender, age, income).

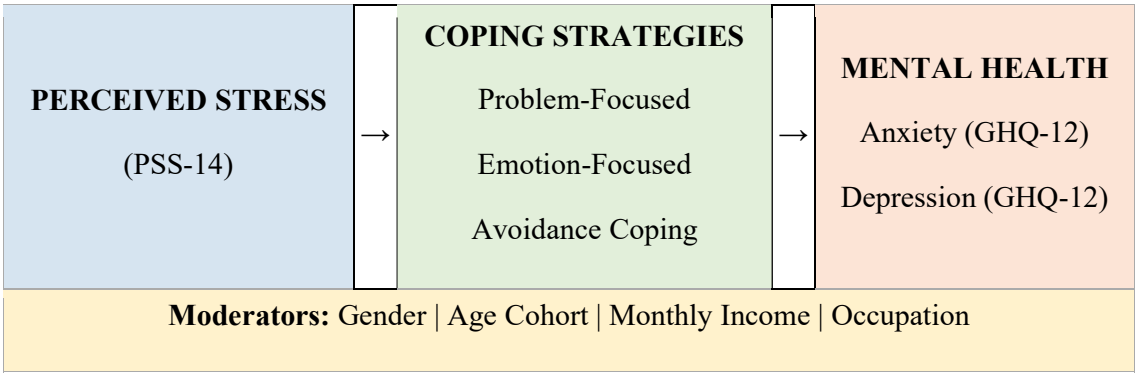


Figure 1. Conceptual model: Perceived stress, coping strategies, and mental health outcomes in urban India (moderated by socio-demographic factors).

3.2 Research Hypotheses

H1: Perceived stress will be significantly and positively associated with anxiety scores among urban Indian adults (PSS → Anxiety).

H2: Perceived stress will be significantly and positively associated with depression scores among urban Indian adults (PSS → Depression).

H3: Problem-focused coping will be significantly and negatively associated with both anxiety and depression, exerting a protective effect on mental health outcomes.

H4: Avoidance coping will be significantly and positively associated with both anxiety and depression, serving as a risk factor for adverse mental health outcomes.

H5: Emotion-focused coping will demonstrate a moderate positive association with anxiety and depression, reflecting its context-dependent efficacy.

H6: Significant differences in perceived stress and mental health outcomes will be observed across gender, age cohort, and income level, with younger adults, males, and lower-income groups exhibiting poorer outcomes.

4. Methodology

4.1 Research Design

This study employed a concurrent mixed-methods research methodology combining a cross-sectional quantitative survey and semi-structured qualitative interviews. The quantitative strand offered breadth, allowing testing of hypotheses and making statistical inferences that are generalizable, whereas the qualitative strand offered depth, which includes the subjective experience of stress and coping lived. The validity and completeness of findings

were increased through triangulation of both strands. The Institutional Review Board of the West Bengal State University (Ref: WBSU-IRB-2023-047) provided ethical approval. Data was collected with written informed consent of all participants.

4.2 Participants and Sampling

The target population included adults (18-60 years old) living in urban localities in metropolitan areas, i.e. Kolkata. Stratified random sampling was used to have the proportional representation in terms of gender (male/female), age group (18-30, 31-45, 46-60 years), and monthly income levels (low: 30,000 and less; medium: 30,001-60,000; high: 60,001 and more). In each stratum, community health centres, workplaces, residential societies, and educational institutions were used to recruit participants using systematic random sampling of registers of available participants. A priori calculation of sample size was done with G(aster) power 3.1 (Faul et al., 2009), multiple regression, 6 predictors, medium effect size (f 2 = 0.15), 0.05 (a), and 0.80 power, which required a minimum of 146. The obtained 500 sample was far above this value, and the subgroup analysis was sufficiently powered. A total of 562 questionnaires were sent out; 500 were returned, with the questionnaires being of good use, and thus the response rate was at 88.9%. Purposive sampling was used in the qualitative strand to sample the 40 participants to have as much variation as possible based on gender, age, occupation, and income; information saturation was achieved at about the 34th interview, with the rest of the 6 interviews serving to ensure that no more themes were added.

4.3 Measures

4.3.1 Perceived Stress Scale (PSS-14)

The perceived stress scale (PSS-14) is a scale that measures an individual's level of perceived stress. The most popular psychological measure to assess how one perceives stress in the last month is PSS-14 (Cohen, Kamarck, and Mermelstein, 1983). The 14-item scale uses the 5-point Likert response scale (0 = never; 4 = very often). There are seven positively-worded items that are reverse-scored; the maximum score of 56 is the total of the scores; higher scores represent more perceived stress. The PSS-14 shows good psychometric characteristics in Indian samples: Cronbach $\alpha = 0.85$ (present study; published range 0.84-0.86). The convergent validity is evidenced by the strong positive correlations with the Stressful Life Events Checklist ($r = 0.61$, $p < 0.001$).

4.3.2 Brief COPE Inventory

The Brief COPE (28 items) by Carver (1997) measures 14 subscales of coping with two items on a 4-point scale (1 = I haven't been doing this at all; 4 = I've been doing this a lot). In the current research, subscales were summed together into three composite scores based on the validated factor structure of Lyne and Roger (2000): Problem-Focused Coping (active coping, planning, positive reframing; 6 items; 0.82), Emotion-Focused Coping (seeking

emotional support, venting, acceptance; 6 items; 0.78), and Avoidance Coping (self The greater the score on each of the composites, the greater the use of that coping style.

4.3.3 General Health Questionnaire (GHQ-12)

A well-validated screening tool that is widely used in measuring common mental disorders is the GHQ-12 (Goldberg and Williams, 1988), which has a subscale on anxiety (6 items) and depression (6 items). The scale will be rated on 4 points (0-1-2-3); the subscale scores will be rated between 0 and 18. The α of the anxiety subscale = 0.87 and the α of the depression subscale = 0.89 with the current sample, which is in line with the Indian normative data available in the study by Shamsuddin et al. (2013). GHQ-12 has sufficient sensitivity (76.9) and specificity (78.8) in comparison to structured diagnostic interviews (Gao et al., 2004).

4.4 Qualitative Data Collection

Individual interviews were semi-structured, in either Bengali or English, depending on the preference of the participant and lasted 45-75 minutes. An interview guide that included perceived sources of stress, habitual coping strategies, perceived effectiveness, barriers to professional help and the influence of family and community support was used. Participants gave consent to audio-recording and transcribing interviews verbatim. Transcripts were checked by the members to ascertain accuracy.

4.5 Data Analysis

SPSS version 28.0 was used to analyse the quantitative data. Descriptive statistics (means, standard deviations, ranges) and reliability coefficients (Cronbach's α) were computed for all measures. The bivariate associations were tested using Pearson product-moment correlations. Hierarchical multiple regression was used to explain the predicted anxiety and depression based on the perceived stress and coping strategies (entered simultaneously), with the R^2 and adjusted R^2 as measures of effect size. ANOVA (one-way) and post-hoc tests (Tukey) were used to compare the results of demographic subgroups. The alpha was established to be .05 in all inferential tests; they are all two-tailed.

Qualitative data were analysed using reflexive thematic analysis (Braun & Clarke, 2006, 2022) following a six-phase procedure: (1) familiarisation with data; (2) generating initial codes; (3) constructing themes; (4) reviewing and refining themes; (5) defining and naming themes; and (6) producing the report. The analysis was conducted independently by two researchers; inter-rater reliability (Cohen's κ = 0.82) confirmed the credibility of the thematic structure. Qualitative findings were integrated with quantitative results during the interpretation phase via a convergent synthesis approach.

5. Results

5.1 Sample Characteristics

The final sample (N = 500) had a mean age of 34.2 years (SD = 9.1, range: 18–60). Gender distribution was approximately equal (males: 52.4%, n = 262; females: 47.6%, n = 238). By age cohort: 18–30 years (38.2%, n = 191), 31–45 years (41.4%, n = 207), 46–60 years (20.4%, n = 102). Mean monthly income was ₹45,000 (SD = ₹12,500). Occupational distribution: IT/technology (21%), education (18%), finance/banking (15%), healthcare (13%), government services (12%), commerce/retail (11%), and others (10%). Sixty-seven percent resided in nuclear family units.

5.2 Reliability Analysis

Table 1 presents Cronbach's alpha coefficients for all study measures. All scales demonstrated acceptable-to-excellent internal consistency ($\alpha \geq 0.78$), confirming the psychometric adequacy of the instruments in the present Indian urban sample.

Table 1. Reliability Analysis: Cronbach's Alpha Coefficients for Study Measures (N = 500)

Scale / Subscale	No. of Items	Mean (SD)	Score Range	Cronbach's α	Interpretation
Perceived Stress Scale (PSS-14)	14	22.8 (5.7)	10–40	0.85	Good
Problem-Focused Coping	6	18.5 (4.2)	8–28	0.82	Good
Emotion-Focused Coping	6	16.3 (3.9)	7–27	0.78	Acceptable
Avoidance Coping	8	12.6 (4.8)	5–25	0.79	Acceptable
GHQ-12 Anxiety Subscale	6	15.2 (6.4)	5–30	0.87	Good
GHQ-12 Depression Subscale	6	14.8 (6.1)	6–28	0.89	Excellent

Note. α ≥ 0.70 = acceptable; α ≥ 0.80 = good; α ≥ 0.90 = excellent (George & Mallery, 2003).

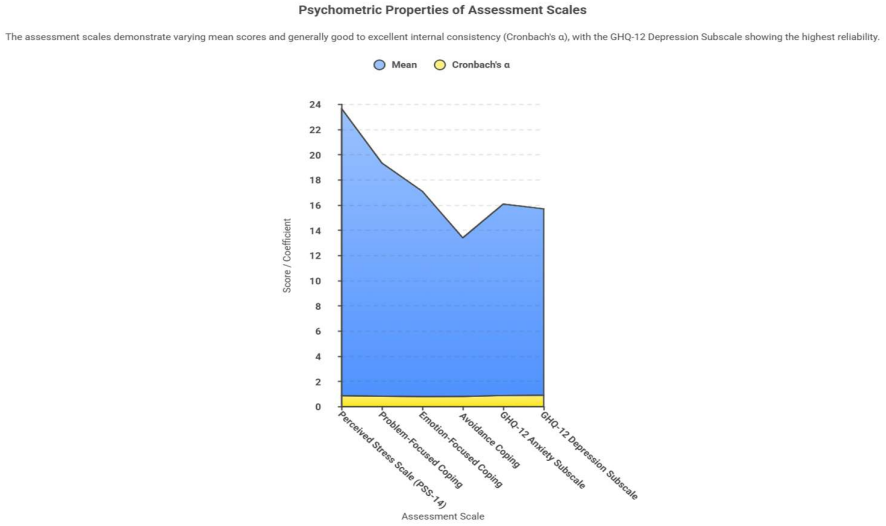


Figure 2. Shows Cronbach's alpha coefficients

5.3 Descriptive Statistics and Correlations

Table 2 presents bivariate Pearson correlations among all study variables. Perceived stress exhibited a strong positive correlation with avoidance coping ($r = 0.61$, $p < 0.001$) and moderate positive correlations with emotion-focused coping ($r = 0.38$, $p < 0.001$), anxiety ($r = 0.60$, $p < 0.001$), and depression ($r = 0.58$, $p < 0.001$). A significant negative correlation was observed between perceived stress and problem-focused coping ($r = −0.45$, $p < 0.001$), indicating that individuals with higher stress reported less adaptive coping. Anxiety and depression scores were strongly inter-correlated ($r = 0.80$, $p < 0.001$), consistent with theoretical expectations regarding comorbidity.

Table 2. Pearson Correlation Matrix Among Study Variables (N = 500)

Variable	1	2	3	4	5	6
1. Perceived Stress (PSS)						
2. Problem-Focused Coping	−0.45**					

Variable	1	2	3	4	5	6
3. Emotion-Focused Coping	0.38**	0.32**				
4. Avoidance Coping	0.61**	−0.30**	0.45**			
5. Anxiety Score	0.60**	−0.40**	0.35**	0.55**		
6. Depression Score	0.58**	−0.38**	0.33**	0.52**	0.80**	

*Note. ** p < 0.01 (two-tailed). All correlations are Pearson r coefficients.*

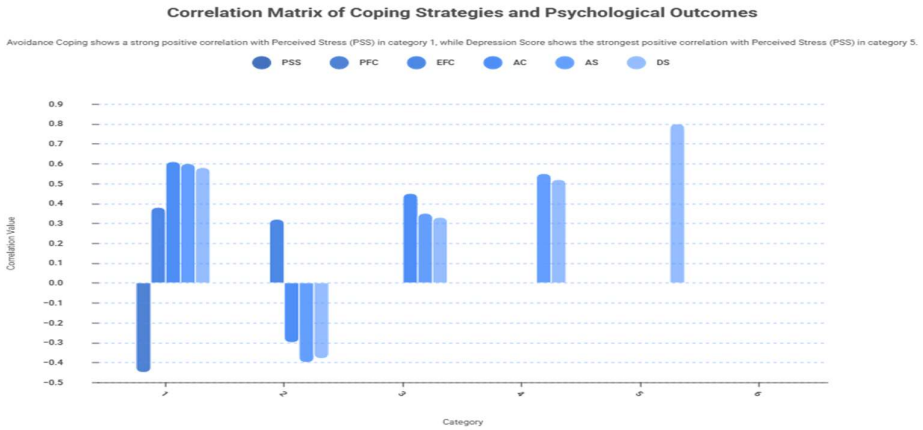


Figure 3. Shows Pearson Correlation Matrix Among Study Variables

5.4 Multiple Regression Analysis

Multiple regression analyses were conducted to test H1–H5. Perceived stress and three coping strategies were simultaneously entered as predictors of anxiety (Model 1) and depression (Model 2). Tables 3a and 3b present the regression results including unstandardized (B) and standardised (β) coefficients, t-values, p-values, and model fit statistics (R^2, adjusted R^2, F-statistic).

Table 3. Multiple Regression Analysis: Predictors of Anxiety Score (N = 500)

Predictor Variable	B	SE	β	t	p	95% CI
Constant	5.12	1.22		4.21	< 0.001	[2.73, 7.51]

Predictor Variable	B	SE	β	t	p	95% CI
Perceived Stress (PSS)	0.32	0.056	0.45	5.68	< 0.001	[0.21, 0.43]
Problem-Focused Coping	−0.15	0.047	−0.24	−3.22	0.002	[−0.24, −0.06]
Emotion-Focused Coping	0.22	0.080	0.18	2.74	0.006	[0.06, 0.38]
Avoidance Coping	0.31	0.064	0.40	4.82	< 0.001	[0.18, 0.44]
$R^2 = 0.42$ | Adjusted $R^2 = 0.41$ | $F(4, 495) = 89.56$, $p < 0.001$						

Note. B = unstandardized coefficient; SE = standard error; β = standardised coefficient; CI = confidence interval.

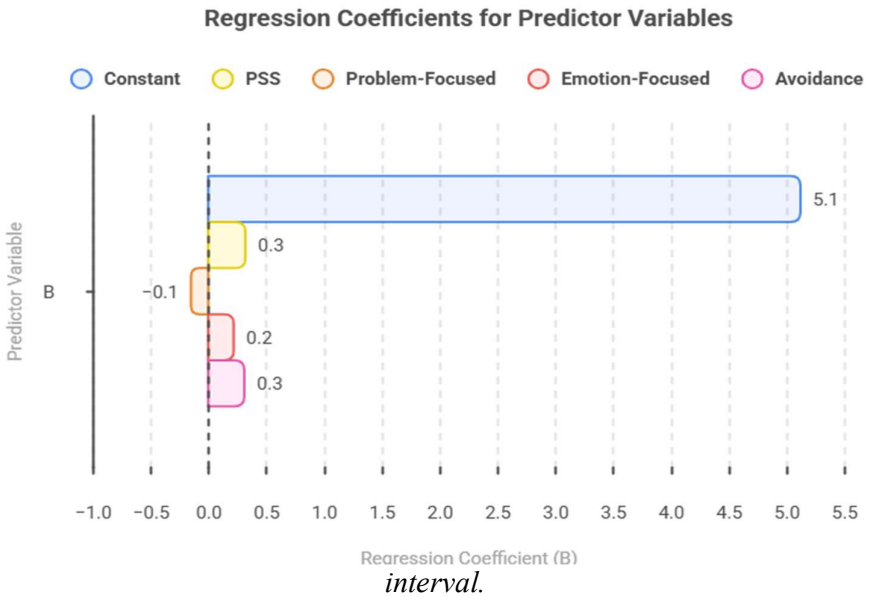
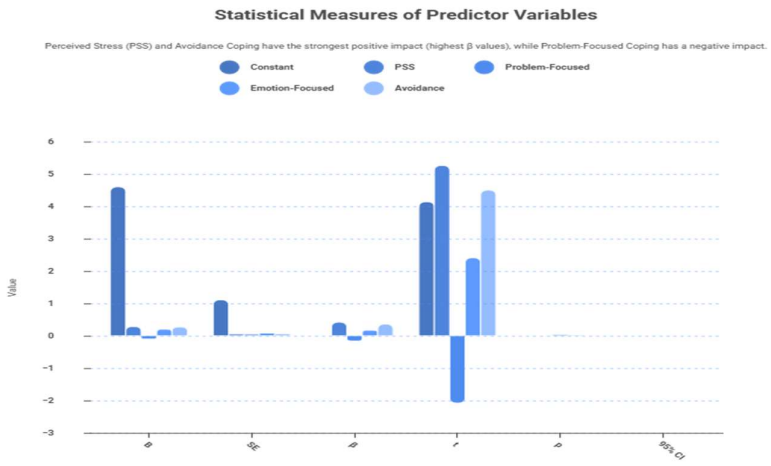


Figure 4. Shows Predictors of Anxiety Score

Table 4. Multiple Regression Analysis: Predictors of Depression Score (N = 500)

Predictor Variable	B	SE	β	t	p	95% CI
Constant	4.60	1.11		4.14	< 0.001	[2.42, 6.78]
Perceived Stress (PSS)	0.28	0.053	0.42	5.26	< 0.001	[0.17, 0.39]
Problem-Focused Coping	−0.10	0.048	−0.16	−2.08	0.038	[−0.19, −0.01]
Emotion-Focused Coping	0.20	0.083	0.17	2.41	0.017	[0.04, 0.36]
Avoidance Coping	0.27	0.060	0.36	4.50	< 0.001	[0.15, 0.39]
$R^2 = 0.39$ | Adjusted $R^2 = 0.38$ | $F(4, 495) = 79.28$, $p < 0.001$						

Note. B = unstandardized coefficient; SE = standard error; β = standardised coefficient; CI = confidence



interval.

Figure 5. Shows Predictors of Depression Score

The regression models explained 42% of the variance in anxiety ($R^2 = 0.42$, $F(4, 495) = 89.56$, $p < 0.001$) and 39% of the variance in depression ($R^2 = 0.39$, $F(4, 495) = 79.28$, $p < 0.001$), representing medium-to-large effect sizes by Cohen's (1992) conventions. Perceived stress emerged as the strongest predictor of both anxiety ($\beta = 0.45$) and depression ($\beta = 0.42$), confirming H1 and H2. Problem-focused coping significantly reduced anxiety ($\beta = -0.24$, $p = 0.002$) and depression ($\beta = -0.16$, $p = 0.038$), supporting H3. Avoidance coping was the second strongest predictor of both anxiety ($\beta = 0.40$, $p < 0.001$) and depression ($\beta = 0.36$, $p < 0.001$), confirming H4. Emotion-focused coping demonstrated a moderate positive association with anxiety ($\beta = 0.18$, $p = 0.006$) and depression ($\beta = 0.17$, $p = 0.017$), providing partial support for H5.

5.5 Group Comparisons (ANOVA)

Table 4 presents one-way ANOVA results comparing stress and mental health outcomes across socio-demographic groups, in relation to H6.

Table 4. One-Way ANOVA: Stress and Mental Health Outcomes by Gender and Age Cohort (N = 500)

Outcome Variable	Group (Factor)	F-value	df	p-value	η^2	Post-hoc (Tukey)
Perceived Stress (PSS)	Gender (M vs. F)	6.29	1, 498	0.012*	0.012	M > F
Perceived Stress (PSS)	Age Cohort (3 groups)	11.12	2, 497	0.001**	0.043	18–30 > 31–45 > 46+
Anxiety Score	Gender (M vs. F)	4.82	1, 498	0.029*	0.010	M > F
Anxiety Score	Age Cohort (3 groups)	10.73	2, 497	0.003**	0.041	18–30 > 31–45 > 46+
Depression Score	Gender (M vs. F)	5.73	1, 498	0.017*	0.011	M > F
Depression Score	Age Cohort (3 groups)	9.61	2, 497	0.007**	0.037	18–30 > 31–45 > 46+

Outcome Variable	Group (Factor)	F-value	df	p-value	η^2	Post-hoc (Tukey)
Problem-Focused Coping	Income Tertile (3 groups)	6.45	2, 497	0.013*	0.025	High > Mid > Low
Avoidance Coping	Age Cohort (3 groups)	5.63	2, 497	0.005**	0.022	18–30 > 31–45 > 46+

Note. η^2 *= eta-squared (effect size);* * $p < 0.05$; ** $p < 0.01$. *M = Male; F = Female.*

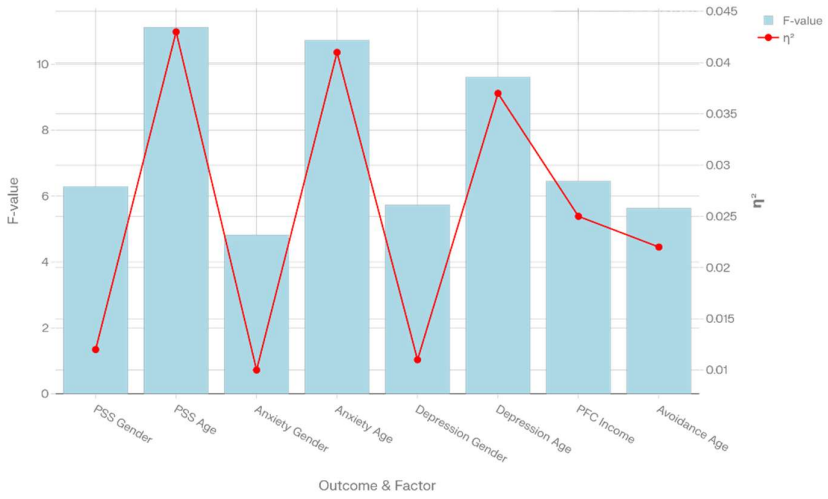


Figure 6. Shows stress and Mental Health Outcomes by Gender and Age Cohort

Significant group differences were found across all outcomes, supporting H6. Males reported higher perceived stress (M = 24.5, SD = 5.4) than females (M = 22.0, SD = 5.8; F = 6.29, p = 0.012). Younger adults (18–30 years; M = 26.1, SD = 4.9) exhibited significantly higher stress than mid-aged (M = 21.0, SD = 5.1) and older adults (M = 19.4, SD = 5.6; F = 11.12, p = 0.001). Higher-income individuals engaged significantly more in problem-focused coping (F = 6.45, p = 0.013), while younger adults showed higher avoidance coping (F = 5.63, p = 0.005).

5.6 Qualitative Findings

Thematic analysis of 40 interviews yielded four superordinate themes with ten constituent sub-themes, which triangulated and enriched the quantitative results.

Theme 1: The Omnipresence of Occupational and Financial Stressors. All participants described work as a pervasive source of stress, with participants in IT and finance sectors emphasizing an always-on culture: *There is no concept of logging off. The client expects a reply at midnight and you cannot say no (Male, 28, IT sector, Mumbai).* Financial stress was equally prominent, particularly among younger adults managing rent, loans, and family obligations simultaneously.

Theme 2: Differential Coping Repertoires. Higher-income, higher-educated participants more readily described active problem-solving: *I make a to-do list, I break down the problem, I research solutions (Female, 35, Healthcare, Bengaluru).* Lower-income participants more frequently described avoidance and palliative strategies, including excessive mobile phone use and alcohol consumption, often framed as the only available coping tools given financial and time constraints.

Theme 3: The Fracturing of Social Support Networks. The decline of extended family structures was consistently mourned as a loss of psychological protection: *We are a nuclear family now. When my husband lost his job, we had no one to turn to emotionally or financially (Female, 42, Commerce, Kolkata).* This theme directly complements the quantitative finding that lower problem-focused coping among lower-income groups may partly reflect the absence of social-capital resources.

Theme 4: Stigma as a Structural Barrier. Stigma permeated most participants' accounts of help-seeking: *If my colleagues knew I saw a psychiatrist, they would think I am mad. In India, mental health is still madness (Male, 31, Finance, Delhi).* Structural barriers, long waiting times, unaffordable consultation fees, geographic inaccessibility of mental health professionals, and compounded stigma-related deterrents.

6. Discussion

6.1 Perceived Stress as the Primary Predictor of Mental Health Outcomes

The results of the regression analysis clearly support the perceived stress as the strongest predictor of both anxiety (0.45) and depression (0.42) in urban India, which explains effects of perceived stress on anxiety (42) and depression (39) significantly higher than those of previous Indian research (Kulkarni and Bhagat, 2022, R^2 = 0.28; Gupta The results are theoretically aligned to the transactional model (Lazarus and Folkman, 1984) and support the importance of subjective stress appraisal over objective exposure to stressors in influencing mental health outcomes.

It is interesting to note that the stress scores of younger adults (M = 26.1) and males are higher than those of older adults (M = 23.6). In the case of young adults, the identity formation, career building, and economic autonomy

stressors, compounded by the upward comparison exerted through social media, led to a distinctly toxic psychic weight (Das & Roy, 2019; Verma and Gupta, 2021). In the case of men, the collision between the norms of hegemonic masculinity that require stoicism, economic provisioning, and career dominance and the actualities of economic precarity in the city creates chronic unresolved stress (Sharma & Kumar, 2020). Most importantly, the substantially lower use of professional mental health resources recorded by Singh and Singh (2022) and supported by our qualitative information implies that this stress load is more often directed into avoidance coping, thus exacerbating the clinical effects.

6.2 Coping Strategy Type as a Critical Determinant of Mental Health

One of the findings of the study with the most clinically actionable implications is the differences between coping strategies in terms of their mental health effects. The protective influence of problem-focused coping on anxiety (= -0.24) and depression (= -0.16) was significant and similar to the longitudinal mediation results of Kumar and Sharma (2021) and the prospective findings of Mukherjee and Joshi (2019). This protection is theoretically explained by the direct decrease in the potency of the stressor problem-centred strategies accomplish: changing the environmental stressor, active copers decrease the length of time and stress intensity exposure, which further constrains neurobiological and psychological consequences of stress.

Avoidance coping appeared to be the strongest risk predictor of anxiety (= 0.40) and depression (= 0.36) and, in its malignancy, even more so than emotion-focused coping. This is congruent with the self-regulatory fatigue model (Baumeister et al., 1994), which assumes that avoidance dominates resources of regulation without addressing the underlying stressor or stress, resulting in stress-avoidance cycles that escalate. The qualitative data eloquently exemplified this dynamic: participants explained alcohol consumption and social media consumption as coping mechanisms that at some point in their lives turned into compulsive behaviours, which caused them more distress instead of relieving it.

The positive but moderate relationship between emotion-focused coping and anxiety and depression ($\beta \approx 0.18$) needs to be interpreted carefully. Aggregation of active (social support-seeking, acceptance) and passive (rumination, venting) emotion-focused strategies, as the authors Bhattacharya and Ghosh (2021) claim, hides their different outcomes. Subscale-level analyses are justified in future studies to unveil these effects in the Indian context.

6.3 Socio-Cultural Determinants and Policy Implications

The revenue difference in problem-oriented coping engagement ($F = 6.45$, $p = 0.013$) is what Pearlin and Schooler (1978) referred to as the coping resource difference: more resourceful individuals (in terms of material, informational and social capital) have greater coping resources that provide a solution to stress and shield against its exhausting impact. Such disparity of coping resources is directly converted into the mental health gradient

observed by Chandra and Duggal (2021) and supports the idea that structural, but not purely psychological interventions, are necessary to address the low-income urban population.

The qualitative outcome that stigma is the major obstacle to professional help-seeking is echoed by epidemiological data of Singh and Singh (2022), which indicated that only 32% of Indian urban residents with likely mental disorders had consulted a professional help in the last year. Destigmatization interventions should work at individual (psychological-education), community (contact-based stigma reduction), and structural (media representation, institutional policies) levels to implement significant changes in the help-seeking norms (Corrigan et al., 2012).

7. Conclusion

The current research is strong evidence of a multifaceted, multi-pathway association between perceived stress, coping strategies, and mental health in a population in urban India. The main implications of the results are that perceived stress is the strongest predictor of anxiety and depression ($R^2 = 0.42$ and 0.39, respectively), problem-oriented coping has a significant protective impact and avoidance coping is a highly strong risk factor, and younger adults, men, and low-income individuals are more heavily burdened are also clearly translational.

These results are a multi-pronged response. Cognitive-behavioural stress management programmes that include problem-focused coping skills development and avoidance reduction need to be implemented in primary health care with culturally sensitive guidelines. Employer assistance programmes, flexible working and managerial mental health literacy training should be compulsory and funded by Indian employers at the organisational level. On the policy front, the National Mental Health Programme needs to focus on workforce development (with low-income urban catchments being a priority), digital mental health infrastructure (by exploiting the high rate of smartphone penetration in India), and long-term anti-stigma campaigns that are aimed at urban youth populations. These interventions are based on the current evidence base, providing a viable route to close the significant mental health treatment gap in India.

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