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IMPACT OF ENVIRONMENTAL FACTORS ON MENTAL WELL-BEING AMONG YOUNG ADULTS IN SOUTH KERALA

Keziah Elizabeth Dona[1], Reshma Babu* and Shaiju S. Dharan[2]

Pharm D Intern[1], Assistant Professor* and Principal/HOD- Pharmacy Practice[2]
Department of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Sciences,
Marayamuttom, Neyyattinkara, Thiruvananthapuram, 695124.

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***Corresponding Author**
Reshma Babu
Assistant Professor, Department of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Sciences, Marayamuttom, Neyyattinkara, Thiruvananthapuram, 695124.

ABSTARCT

The impact of environmental factors on mental well-being among young adults is a growing concern in contemporary public health and psychological research. Young adulthood, a critical period of psychological development, is highly susceptible to environmental stressors such as air pollution, noise, urban crowding, exposure to green spaces, and climate-related events. These factors can significantly influence emotional regulation, cognitive function, and social behaviour. This review explores how both built and natural environments affect mental health outcomes such as anxiety, depression, stress, and overall psychological resilience. Studies indicate that prolonged exposure to high pollution levels and urban noise correlates with increased rates of anxiety and mood disorders, whereas regular interaction with green spaces promotes psychological restoration and stress reduction. Socioeconomic disparities further exacerbate the effects of negative environmental influences, especially in densely populated or underserved areas. Technological overexposure and lack of physical outdoor activity in urbanized settings also contribute to feelings of isolation and reduced emotional well-being. Addressing these challenges requires a multidisciplinary approach involving urban planning, environmental policy, and mental health services. Creating youth-friendly, sustainable environments and improving access to nature may be essential in promoting long-term mental health among young adults. Further research is needed to quantify the direct and indirect effects of specific environmental exposures on psychological outcomes in this

vulnerable population.

KEY-WORDS: Mental well-being, Environmental stressors, young adults, Urbanization, Green spaces.

INTRODUCTION

Mental well-being is an essential component of overall health, particularly during young adulthood, a life stage marked by significant psychological, social, and emotional transitions. Young adults, typically aged between 18 and 30, often face unique stressors such as academic pressures, career uncertainty, identity formation, and social expectations. In recent years, growing attention has been given to the role of environmental factors—both physical and social—in influencing mental health outcomes in this age group.

Environmental factors encompass a wide range of elements, including air and noise pollution, exposure to natural environments, urban density, access to green spaces, climate variability, and even housing quality. Urbanization, while offering numerous opportunities, is also associated with increased exposure to noise, overcrowding, and reduced access to restorative natural settings—all of which can negatively affect mental health. Studies have shown that individuals living in highly urbanized environments report higher levels of anxiety, stress, and depressive symptoms compared to those residing in more natural or rural settings.

In addition to physical elements, social aspects of the environment—such as community cohesion, social support networks, and socioeconomic status—also influence mental well-being. Disadvantaged communities often face multiple environmental risks simultaneously, intensifying their vulnerability to mental health challenges. Technological advancements, though beneficial, can also lead to increased screen time and reduced physical interaction with the environment, further affecting emotional and mental resilience.

Understanding the multifaceted relationship between environmental factors and mental health among young adults is essential for developing effective public health strategies, urban planning policies, and mental health interventions. By creating supportive, healthy, and sustainable environments, we can help promote better mental health outcomes and quality of life for the next generation.

LITERATURE REVIEW

Hickman C et al, **Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey**, The Lancet Planetary Health, 2021;5(12): e863–e873, presented a global survey indicating that over 60% of youth feel extremely or very worried about climate change. The study describes how this worry contributes to symptoms of eco-anxiety, sadness, anger, and helplessness, signalling a rising mental health issue among youth facing environmental uncertainty.

Newbury JB et al. **Environmental factors such as pollution and urban stressors have shown a significant association with poor mental health outcomes in young adults**, JAMA Psychiatry, 2019;76(6):614–623, conducted a longitudinal study demonstrating that adolescents exposed to high levels of nitrogen dioxide and fine particulate matter (PM2.5) were more likely to develop depressive symptoms by age 18. This research underscores the impact of air quality on emotional and cognitive development in youth.

MATERIALS METHODS

The study was conducted among young adults aged 18-35 years in South Kerala.

Experimental Design

The study was a Knowledge, Aptitude, and Practices (KAP) approach which was carried out over a period of 1 month. The study included the patients aged 18-35 years.

Sample Size

The sample size of the cross-sectional study is calculated by the following formula

$$\text{Sample Size } n = \frac{Z\alpha^2 P(1-P)}{d^2}$$

Where:

Zα – The standard normal variate with α% level of significance

P- Estimated proportion of the characters

d- Precision or margin of errors

From the previous study, the positive emotional well-being among the youth was reported as 59%. The margin of error or precision is assumed to be 9% with a significant level of 5%. Then Zα = 1.96

P = 59%

d = 9%

The required sample size is estimated as

Sample Size n= $\frac{1.96^2 X0.59X0.41}{(.09)^2}$ = 115 samples.

Study Variables

Patient demographic details.

Study Tools

Self-structured questionnaires.

RESULTS AND DISCUSSION

Total Number of Participants- 114

Age-wise Distribution:

The table summarizes the descriptive results according to age of patients.

Table 1: Age wise Distribution.

VARIABLE	FREQUENCY (N)	PERCENTAGE (%)
18-20	24	21
21-23	28	24
24-26	22	19
27-30	41	36

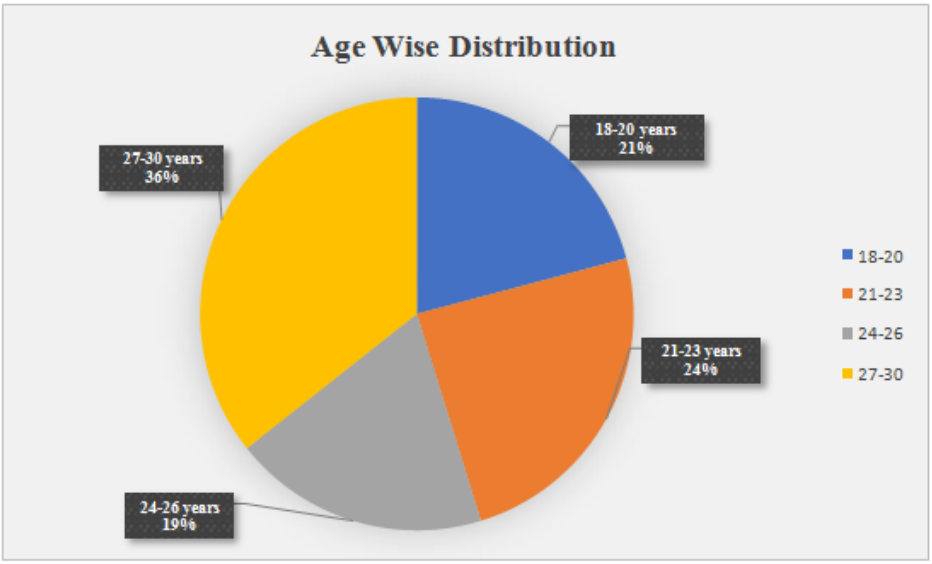

Figure 1: Age-Wise Distribution.

URBAN OR RURAL AREA

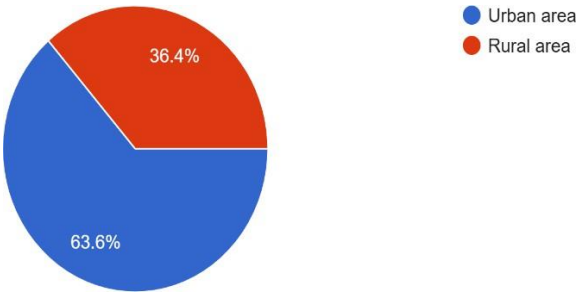

Figure 2: Distribution among Urban or Rural Areas.

The above diagrammatic representation shows that most of the participants are from urban areas mostly due to their work or studies. It shows how fast is urbanisation growing and how much it affects our mental wellbeing.

CURRENT STATUS

The participants who were up for the study showed that our study population was having equal numbers of students and employed people. Although a minor fraction was unemployed. Among the studying population most of them pursued a professional course.

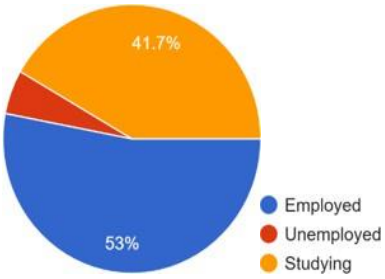

Figure 3: Current Status.

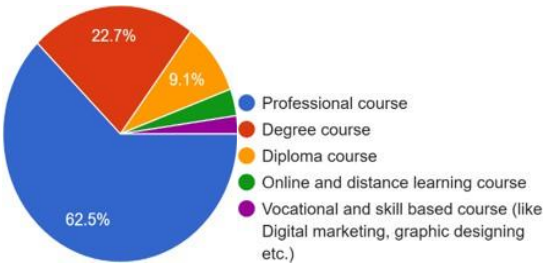

Figure 4: Courses pursued by student participants.

FAMILY RELATIONSHIPS

Various number of surveys were conducted in every aspect of the relationship between the participant and their families. From sibling-parent-grandparent interaction were analysed. Most of the participants did not have siblings and among the participants with siblings, a majority of them were on good terms with siblings. Another interesting aspect about the study population was that most of them with siblings were either the oldest or the second oldest in the family.

On evaluation of the relationship with the parents most of them had good relationship with their parents and could share anything with them. Grandparent connection survey showed most of them stayed away from their grandparents this can be mostly due to urbanisation.

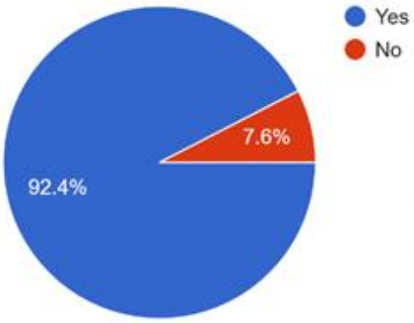

Figure 5: Whether the participants have siblings

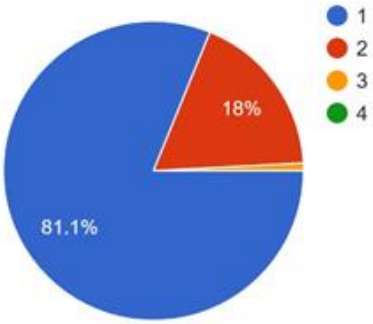

Figure 6: Number of siblings

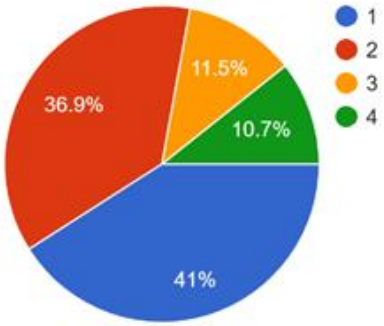

Figure 7: Oldest to youngest sibling

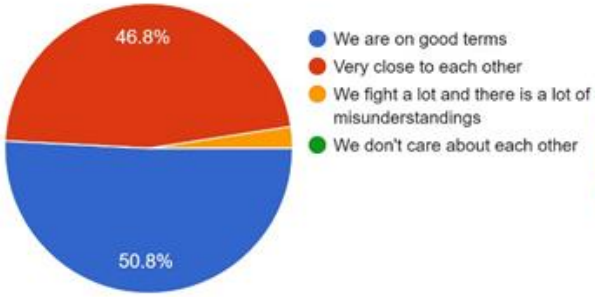

Figure 8: Relationship with siblings

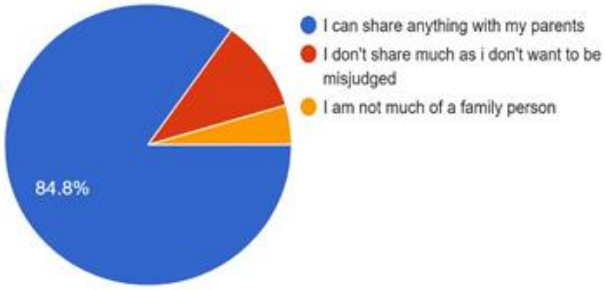

Figure 8: Relationship with parents

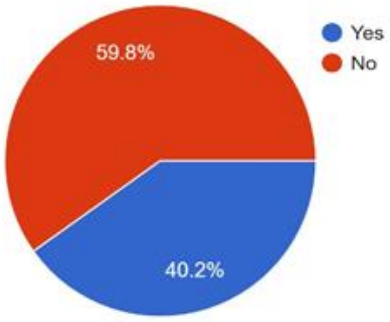

Figure 9: Staying with grandparents

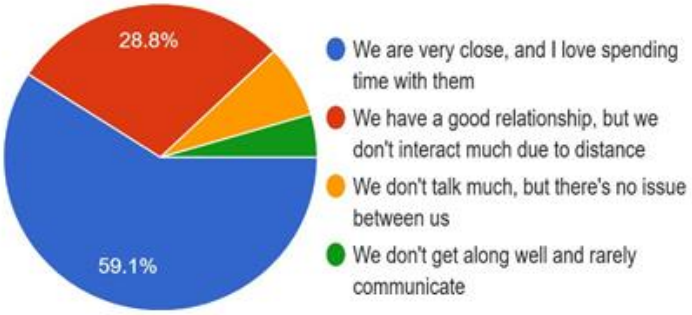

Figure 10: Relationship with grandparents

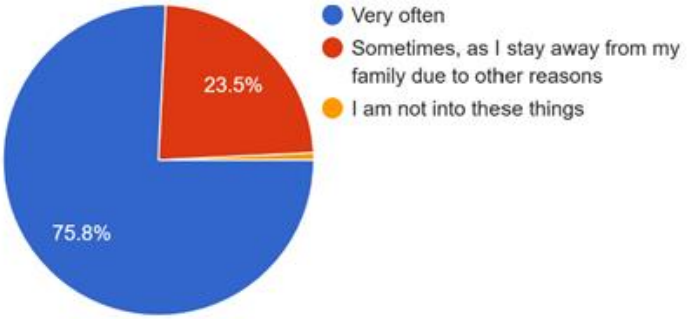

Figure 10: Spending time with family

PERSONAL AND PROFESSIONAL BALANCE

Among the census, it was found that a majority of the participants spent their leisure time either alone or scrolling through the social media.

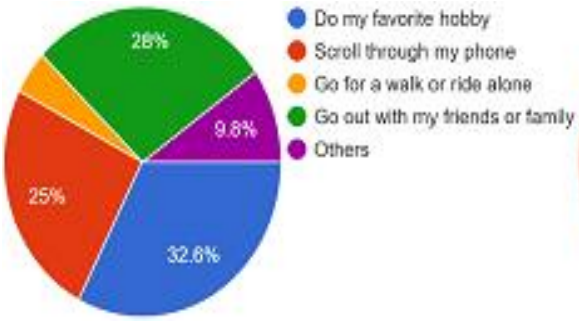

Figure 11: Leisure time management

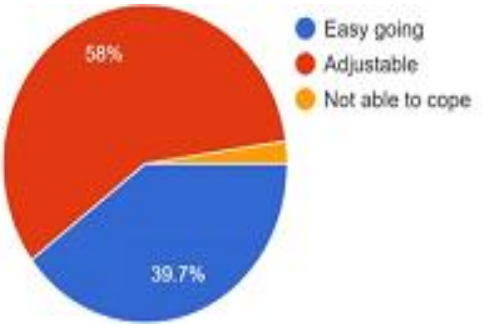

Figure 12: Coping with the professional environment.

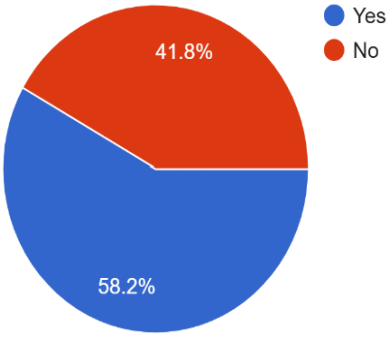

Figure 13: Work Pressure Statistics.

PEER AND TEACHER CONNECTIONS

The study graphics showed a majority of the participants felt comfortable with teachers but almost the same percentage of the participants felt vice versa. In the category of relationship with peers, most of them had a good relationship with there peers although less than 5% of the participants had difficulty in that aspect.

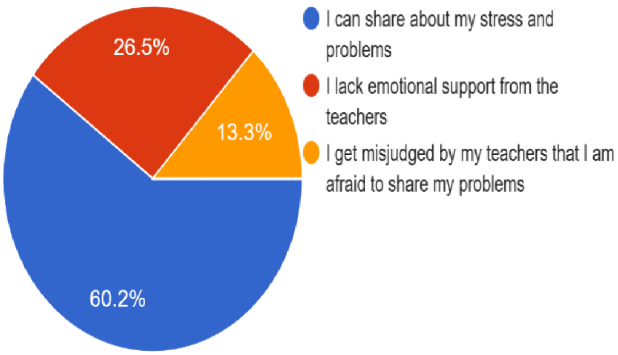

Figure 14: Teacher relationship

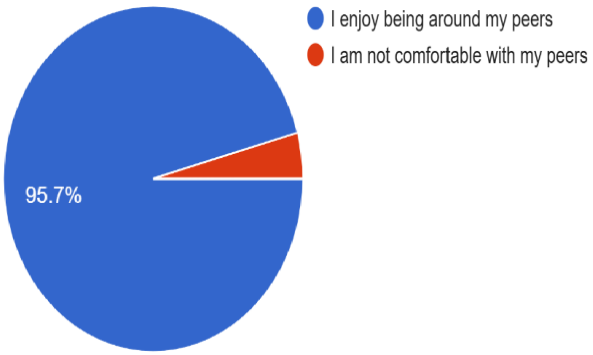

Figure 15: Peer relationship

OVERALL MENTAL STATUS

The study showed the overall mental statistics of the participants as in the figure below. A majority of the participants were happy with their mental well-being although over 9% never cared about their mental status.

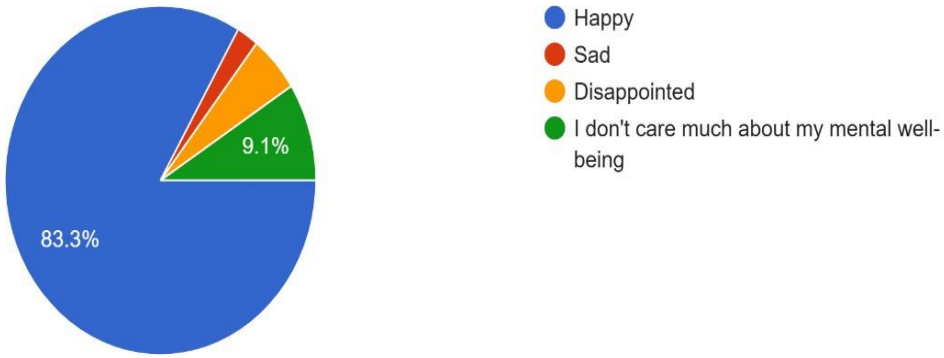

Figure 16: Mental status.

CONCLUSION

The findings of this study emphasize the growing influence of environmental and social factors on the mental well-being of young adults, particularly in rapidly urbanizing regions such as South Kerala. The results highlight a complex interplay between urban living conditions, family dynamics, academic/professional stress, and social relationships in shaping psychological health.

Urbanization, although associated with better educational and professional opportunities, appears to contribute to increased screen time, reduced physical interaction, and diminished intergenerational family bonds. Participants who spent more time in isolation or on social media platforms reported greater emotional exhaustion and poorer work-life balance. On the other hand, strong family ties, peer support, and a sense of belonging within academic or workplace settings were associated with more positive mental health outcomes.

Despite the majority of participants reporting satisfaction with their mental well-being, a notable proportion remained indifferent or unaware of their psychological status—signifying a need for improved mental health literacy and support systems. Furthermore, limited engagement with nature and the gradual erosion of traditional family structures due to urban migration were identified as subtle yet significant stressors.

Addressing these issues requires an integrated approach involving policymakers, urban planners, mental health professionals, and educational institutions. Creating accessible green

spaces, promoting community-based mental health programs, and encouraging healthy digital habits can help mitigate environmental stressors.

In conclusion, promoting mental wellness in young adults demands proactive strategies to create balanced, supportive, and inclusive environments—both physical and emotional.

Future research should aim to explore longitudinal trends and interventions that enhance psychological resilience amidst evolving environmental challenges.

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