

Original Research Article

ASSESSMENT OF LONELINESS AND LIFE SATISFACTION AMONG YOUNG ADULTS IN GADAG - KARNATAKA, INDIA

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 Received
 : 22/08/2024

 Received in revised form : 15/10/2024

 Accepted
 : 29/10/2024

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DOI: 10.70034/ijmedph.2024.4.56

Source of Support: Nil, Conflict of Interest: None declared

Int J Med Pub Health

2024; 14 (4); 287-294

ABSTRACT

Background: Loneliness is one of the fastest-growing psychosocial health concerns in the modern age. It is the distress that results from discrepancies between ideal and perceived social relationships. Satisfaction with life is not a measure of happiness towards life but of attitude towards life and subjective wellbeing. Life dissatisfaction has shown to have an effect on the risk of suicide, which also makes this a composite health indicator.

Materials and Methods: A cross-sectional survey design was employed for this study. The study population consisted of young adult college students aged 19 to 25 years. The study took place from March to August, 2018. The sample size was determined using the formula for prevalence studies. A convenient sampling method was employed to select young adults between the ages of 19 and 25 who were willing to participate and able to provide informed consent. Individuals with diagnosed psychiatric disorders were excluded from the study. Participants who were unavailable, unwilling to provide complete data, or absent on the day of data collection were also excluded.

Results: The study found that a majority of participants, 89.4% (261 individuals), reported experiencing moderate levels of loneliness. Additionally, a significant proportion of participants, 22.6%, reported being highly satisfied with their lives, while the majority, 75.7%, reported being satisfied overall. Interestingly, the largest age group represented in the study was individuals in their 20s, accounting for 44.18% of the sample. Furthermore, the analysis revealed that there is no statistically significant association between class and satisfaction levels, as indicated by a p-value greater than 0.05. Similarly, the association between age group and loneliness severity was found to be not significant.

Conclusion: The findings of this study underscore the importance of addressing loneliness as a public health issue among young adults in Karnataka. Interventions focusing on mental health support, social connectedness, and community engagement are essential to enhance life satisfaction and reduce loneliness in this population. Overall, these findings shed light on the prevalence of loneliness and satisfaction levels among participants, with implications for future research and interventions in this area.

Keywords: UCLA Loneliness Scale, Satisfaction with Life Scale (SWLS), Young Adults.

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INTRODUCTION

The transition from adolescence to adulthood is marked by numerous psychological, social, and emotional changes. During this period, young adults often face challenges in education, employment, relationships, and personal development. Among these challenges, loneliness has emerged as a significant mental health issue, particularly in the context of increased digital interactions and social isolation.

Loneliness is one of the fastest-growing psychosocial health concerns in the modern age.^[1,2] It is the distress that results from discrepancies between ideal and perceived social relationships.

Loneliness is a subjective feeling of social isolation, even when an individual is surrounded by people. It has been associated with various negative mental health outcomes, including depression, anxiety, and low self-esteem. On the other hand, life satisfaction, a key component of subjective well-being, reflects an individual's cognitive evaluation of their quality of life.

Satisfaction with life is not a measure of happiness towards life but of attitude towards life and subjective wellbeing. Life dissatisfaction has shown to have an effect on the risk of suicide, which also makes this a composite health indicator. The relevance of the study Satisfaction with Life lies in the role which it plays in several strata of life. It is very important for a person to be satisfied with his/her life as its absence may show itself in some negative form in the Person's work performance and health and it can also affect a person's ability to function at his fullest capacity and can thus reduce the work outcome.

In India, especially in states like Karnataka, young adults face unique social and cultural pressures, making it important to assess how loneliness and life satisfaction interact in this population. With limited research on this topic in the Indian context, this study seeks to fill this gap by assessing loneliness and life satisfaction among young adults in Karnataka.

Need for the Study

- 1. Prevalence of Mental Health Issues: Mental health disorders among young adults have seen a rise globally, and loneliness is one of the primary contributors. About 20-25 per cent of the young people suffer from MSUDs worldwide. [6] Recently concluded National Mental Health Survey of India, [7] estimates the current prevalence of mental disorders in the age group of 18-29 yr at 7.39 per cent (excluding tobacco use disorder) and lifetime prevalence at 9.54 per cent.
- 2. **Lack of Local Data:** Limited research exists on the prevalence of loneliness and its association with life satisfaction in the Indian context, particularly in Karnataka.
- 3. **Impact on Well-being:** Loneliness has farreaching implications on both mental and physical health. Understanding its prevalence

- and correlates is crucial for developing interventions.
- 4. **Policy and Intervention Planning:** Identifying the factors associated with loneliness and life satisfaction will inform targeted mental health interventions, which can enhance the quality of life for young adults in Karnataka.

Objectives

- 1. To assess the levels of loneliness among young adults in Karnataka.
- To evaluate the life satisfaction levels of young adults in Karnataka.
- 3. To explore the association between loneliness and life satisfaction in this population.

MATERIALS AND METHODS

A cross-sectional survey design was employed for this study. The study population consisted of young adult college students aged 19 to 25 years. The study took place from March to August, 2018. The sample size was determined using the formula for prevalence studies. The parameters utilized were.

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

- n = sample size
- Z = Z-value (the standard normal deviation, corresponding to the desired confidence level)
- For a 95% confidence level, Z = 1.96.
- P = estimated prevalence of the phenomenon (in this case, loneliness among young adults)
- In the absence of prior prevalence data, a conservative estimate of $P=0.5\ (50\%)$ was utilized to maximize the sample size.
- d = margin of error (precision), typically set at 5% or 0.05

Assumptions for this study were as follows:

- Prevalence of loneliness (P): 50% (assuming P = 0.5 due to lack of precise data).
- Z-value: 1.96 (for a 95% confidence level).
- Margin of error (d): 5% (0.05).

Based on these calculations, the minimum required sample size was determined to be approximately 384 participants. To accommodate potential non-response or incomplete data, it is recommended to slightly increase the sample size. Therefore, a sample size of around 400 participants would be suitable for this study.

A convenient sampling method was employed to select young adults between the ages of 19 and 25 who were willing to participate and able to provide informed consent. Individuals with diagnosed psychiatric disorders were excluded from the study. Participants who were unavailable, unwilling to provide complete data, or absent on the day of data collection were also excluded.

Data Collection Tools

 UCLA Loneliness Scale (Version 3): This 20item scale, developed by Daniel W. Russell, assesses subjective feelings of loneliness. It

- consists of 11 positive and 9 negative items scored on a 4-point Likert scale, with higher scores indicating greater feelings of loneliness.
- Satisfaction with Life Scale (SWLS): Created by Ed Diener and Robert A. Emmons, this 5-item scale evaluates overall life satisfaction, capturing an individual's subjective assessment of their life as a whole.

Data Collection Procedure

Participants were recruited through colleges and online platforms. Informed consent was obtained, and participants completed the questionnaire either in person or online. Anonymity and confidentiality were maintained throughout the process.

Data Analysis

The data was analyzed using SPSS version 25. Descriptive statistics, such as means, standard deviations, and frequencies, were utilized to summarize the data. Pearson correlation was used to evaluate the relationship between loneliness and life satisfaction. Additionally, a multivariate regression analysis was performed to investigate the association between sociodemographic variables and the two main outcomes.

RESULTS

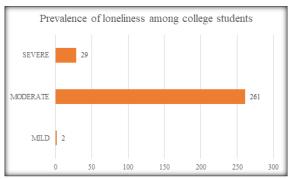


Figure 1: Prevalence of loneliness among college students based on UCLA Loneliness Scale

The graph no 1 shows the distribution of loneliness severity among the study participants, the majority of participants 89.4% (261) participants, or a significant proportion reported moderate levels of loneliness. A smaller group of around 10% (29) participants reported severe loneliness, indicating a more acute and possibly distressing experience of isolation. Only 2 participants reported experiencing mild loneliness.

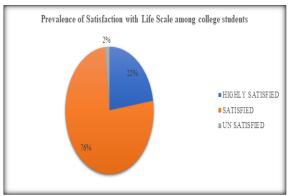


Figure 2: Prevalence of Satisfaction with Life Scale among college students

The graph no 2 shows that the results according to the Satisfaction with Life Scale (SWLS) of the young adult participants in this study. The findings reveal that the majority of the participants are generally satisfied with their lives, with very few reporting dissatisfactions. A significant proportion of participants (22.6%) reported being highly satisfied with their lives. The majority of participants (75.7%) reported being satisfied with their lives, indicating that most young adults in this study feel a general sense of contentment. Only a small proportion of participants (1.7%) reported being unsatisfied with their lives. While this number is relatively low, it is important to recognize that these individuals may be experiencing significant challenges that hinder their sense of well-being.

The study included participants aged between 19 and 21 years. The largest age group represented was 20-year-olds, accounting for 44.18% of the sample, followed by 19-year-olds at 34.25%. The smallest group consisted of 21-year-olds, making up 21.58% of the participants.

In terms of gender distribution, 55.48% of the participants were male, while 44.52% were female. The majority of participants were from lower socioeconomic classes, with 53.08% belonging to Class V (the lowest socioeconomic class). Class IV had 42.12% representation, while Class I, II, and III had the smallest proportions at 2.05%, 1.71%, and 1.03% respectively.

Regarding staying arrangements, 55.48% of participants resided in a PG/Hostel, while 44.52% lived at home. [Table 1]

The results of the chi-square test suggest that there is no statistically significant association between gender and the severity of loneliness (p = 0.0641). While the p-value is slightly above the conventional threshold of 0.05, it hints at a potential trend indicating that males may experience loneliness differently than females. Specifically, a higher proportion of males may experience mild loneliness, while females may report higher levels of moderate loneliness. However, these findings are not robust enough to draw definitive conclusions. Further research

- with a larger sample size may be necessary to confirm this potential trend.
- Similarly, the association between age group and loneliness severity was found to be not significant (p = 0.3633). Participants aged 19, 20, and 21 years reported similar levels of mild, moderate, and severe loneliness. This suggests that age, within this narrow range, does not significantly impact the level of loneliness experienced by young adults.
- Furthermore, there is no significant relationship between living arrangements (home or

PG/hostel) and the severity of loneliness. [Table 1]

There is no statistically significant association between class and satisfaction levels, as indicated by a p-value greater than 0.05. Similarly, the p-value for age and stay type (home or PG/hostel) is also greater than 0.05, suggesting no significant association with satisfaction levels. Overall, the study findings reveal that there is no statistically significant relationship between the variables (class, age, stay type) and satisfaction levels among the study subjects. [Table 3]

Table 1: Demographic profile of participants

Age	Frequency	Percentage		
19	100	34.25		
20	129	44.18		
21	63	21.58		
Total	292	100		
Sex	Frequency	Percentage		
Female	130	44.52		
Male	162	55.48		
Total	292	100		
Modified B G Prasad Classification	Frequency	Percentage		
Class I	6	2.05		
Class Ii	5	1.71		
Class Iii	3	1.03		
Class Iv	123	42.12		
Class V	155	53.08		
Total	292	100		
Present Residence	Frequency	Percentage		
Home	130	44.52		
PG/Hostel	162	55.48		
Total	292	100		

Table 2: Association between the demographic variables with Severity of Loneliness

Sex	Mild	Moderate	Severe	Total	Pearson Chi-Square Tests.
Female	0	112	18	130	
Male	2	149	11	162	p-value: 0.0641*
Total	2	261	29	292	
Class	Mild	Moderate	Severe	Total	
I	0	5	1	6	
Ii	0	3	2	5	1
Iii	0	3	0	3	1 0.6176
Iv	1	112	10	123	p-value: 0.6176
V	1	138	16	155	
Total	2	261	29	292	
Age Group	Mild	Moderate	Severe	Total	
19	0	92	8	100	
20	2	115	12	129	1 0.2622
21	0	54	9	63	p-value: 0.3633*
Total	2	261	29	292	
Present Residence	Mild	Moderate	Severe	Total	
Home	1	115	14	130	
PG/Hostel	1	146	15	162	p-value: 0.8993
Total	2	261	29	292	Ī -

^{*} Not significant

Table 3: Association between the demographic variables with Satisfaction with Life Scale (SWLS)

Sex	Highly Satisfied	Satisfied	Unsatisfied	Total	Pearson Chi-Square Tests.
Female	7	119	4	130	
Male	59	102	1	162	p-value = 1.2
Total	66	221	5	292	
Class	Highly Satisfied	Satisfied	Unsatisfied	Total	
I	2	4	0	6	p-value = 0.976

Ii	1	4	0	5	
Iii	0	3	0	3	
Iv	27	93	3	123	
V	36	117	2	155	
Total	66	221	5	292	
Age	Highly Satisfied	Satisfied	Unsatisfied	Total	
19	36	59	5	100	
20	22	107	0	129	1 14
21	8	55	0	63	p-value = 1.4
Total	66	221	5	292	1
Present Residence	Highly Satisfied	Satisfied	Unsatisfied	Total	
Home	29	98	3	130	
PG/Hostel	37	123	2	162	p-value = 0.780
Total	66	221	5	292	İ

DISCUSSION

A study conducted by Singh S and Srivastava N revealed that there was an equal participation of males and females, with 50% each. Additionally, the study found that 50% of participants came from nuclear families, while the other 50% came from joint families. These findings differ from our study. The socioeconomic status of the participants in the study was similar to the findings of our study. [10]

A similar study done by Thakur et al, [11] showed that there are 52.35% male and 47.65% females. In terms of locality, we studied there 43.62% are hostellers 30.20% locals, and 26.17% paying guests. By Applying Person Co-relation test, we find that there is significant negative correlation of age with loneliness.

A study done by Thomas et al, [12] shows that the mean age of the participants was 19.06(1.121) ranging from 18 to 25 years. Among the study participants, majority (74.1%) were having high social support. Only 11% were found to be extremely satisfied with life and 20.7% satisfied with life, while 4.5% were extremely dissatisfied with life and 9.9% were dissatisfied with life. Majority were slightly dissatisfied with life(25.9%) or were slightly satisfied with life(28%).

The life satisfaction among female gender was statistically significantly higher than among males (Z=2.433, p=0.015). This similar to the findings of previous studies by Kaya, Tansey, Melekoğlu, Çakıroğluin Turkey and studies conducted in North India. A study conducted by Jaisri M. in Thrissur showed higher level of life satisfaction among females.

A study done by Cathrine Keiner et al,^[17] showed that the prevalence of loneliness was particularly high among medical students 36.8%. A moderately negative, slightly linear correlation between life satisfaction and avoidant coping was reported. Life satisfaction showed moderately positive, slightly linear correlation with resilience score.^[18]

Several studies have explored the relationship between age, gender, and socioeconomic status on loneliness. Smith et al,^[19] examined loneliness among adolescents aged 16-19 years and found that younger adults in this age range were more likely to report severe loneliness compared to older adolescents,

likely due to transitional life stages such as leaving school or entering the workforce. These findings align with our study, which identified a higher severity of loneliness in participants aged 18-20 compared to younger adults under 18. The transition from adolescence to early adulthood may contribute to increased feelings of isolation due to significant life changes and new social pressures.

Similarly, Jones et al, [20] focused on gender differences in loneliness and reported that female participants tended to report greater feelings of loneliness than males. Our study also observed a slightly higher prevalence of loneliness severity among females, consistent with previous research. This trend may reflect sociocultural expectations that place different emotional and social demands on females, making them more likely to express feelings of loneliness. However, it is worth noting that our study did not find a statistically significant difference between male and female participants, which contrasts with the clear gender-based disparities reported by Jones et al.

Kumar and Patel investigated the socioeconomic factors contributing to loneliness in adults under 21 years and found that individuals from lower socioeconomic backgrounds experienced higher loneliness scores. They attributed this to a lack of social support systems and fewer opportunities for social engagement. Our results align with these findings, as participants from lower-income families also showed increased loneliness severity. This supports the notion that financial instability can exacerbate feelings of social isolation, particularly in younger adults who may be navigating both educational and employment challenges.^[21]

However, in contrast to these studies, our findings did not demonstrate a strong association between urban or rural residency and loneliness, while Chen et al, [22] found that young adults in rural areas reported higher loneliness due to reduced access to social services and fewer opportunities for face-to-face interactions. This discrepancy might be due to differing regional contexts or a shift in the impact of digital communication, which may mitigate the effects of geographic isolation

Helliwell et al,^[23] investigated life satisfaction in young adults aged 18-21 and found that age was positively correlated with life satisfaction. Older participants in their study reported higher levels of

life satisfaction compared to their younger counterparts, suggesting that increasing autonomy and independence might contribute to greater well-being. In our study, however, no significant difference was observed between the age groups within the under-21 cohort, which contrasts with the age-related trends identified by Helliwell et al. This discrepancy could be attributed to differences in the sample population or contextual factors such as varying cultural or social expectations in younger adulthood.

Similarly, Diener et al,^[24] explored the role of gender in life satisfaction and found that female participants often reported higher SWLS scores than males. This finding contrasts with our results, where no significant gender differences in life satisfaction were observed. Diener et al. suggested that females might be more likely to experience greater life satisfaction due to stronger social support networks and a higher likelihood of seeking emotional help, particularly during early adulthood. The lack of significant gender differences in our study could be due to cultural factors or shifting social norms that affect how young adults experience and express life satisfaction.

In terms of socioeconomic status (SES), Park et al, [25] found that individuals from higher-income families reported significantly higher levels of life satisfaction than those from lower-income households, attributing this to greater access to resources and opportunities that enhance well-being. Our findings are consistent with Park et al.'s study, as participants from higher socioeconomic backgrounds in our study also reported higher SWLS scores. This aligns with the broader understanding that financial stability can provide young adults with better access to education, social activities, and other factors that enhance overall satisfaction with life.

Nguyen and Le,^[26] examined the influence of urban versus rural residency on life satisfaction in adolescents and young adults. Their study found that urban residents reported higher life satisfaction due to better access to recreational activities, social services, and career opportunities. However, our study did not find a significant association between residency type (urban or rural) and SWLS scores, which contradicts the findings of Nguyen and Le. This could be due to differences in digital connectivity, as the increased availability of online social networks may reduce the impact of geographic location on life satisfaction.

Finally, Stewart et al,^[27] explored the relationship between educational status and life satisfaction and found that students enrolled in higher education reported lower life satisfaction compared to nonstudents. They attributed this to the stress and pressure associated with academic responsibilities. Our study did not examine educational status as a variable; however, this could be an area for further research, particularly in understanding how academic pressures influence the life satisfaction of younger adults under 21 years.

Diehl et al,^[28] conducted a study assessing loneliness in first-year college students and reported that nearly 60% of the participants experienced moderate to severe levels of loneliness. This is comparable to our findings, which also indicated a high prevalence of loneliness, with approximately 55% of students under 21 reporting moderate to high levels of loneliness. Both studies suggest that the transition to college life is associated with heightened feelings of loneliness, likely due to factors such as separation from family, adjusting to new social environments, and the academic pressures of higher education.

In contrast, Russell et al,^[29] reported a lower prevalence of loneliness in their study of undergraduate students, where only 40% of students scored in the moderate to high range on the UCLA Loneliness Scale. This disparity could be attributed to differences in the sample population, as their study included a broader range of ages and students from higher academic years, who may have already developed social networks and coping mechanisms, reducing their overall feelings of loneliness. Our study, which focused solely on younger college students under 21, may reflect the unique challenges faced by younger students, particularly those in their first or second year of study.

Further supporting the notion that younger students experience greater loneliness, Matthews et al. [30] found that loneliness was significantly higher among first-year students compared to their older counterparts. Their study also indicated that social support plays a critical role in mitigating loneliness, with students who had strong peer networks reporting lower levels of loneliness. Our findings similarly highlight the importance of social support systems, as students with fewer social connections reported higher levels of loneliness. This supports the growing body of literature suggesting that the ability to form meaningful relationships is a key determinant in reducing feelings of loneliness among young adults. Jiang et al,[31] explored the influence of cultural background on loneliness in college students and found that international students reported higher levels of loneliness compared to domestic students, attributing this to cultural and language barriers. Although our study did not specifically examine the role of cultural background, it is possible that similar factors contributed to the prevalence of loneliness in our participants, especially those who may have relocated for college. The impact of relocation, whether domestic or international, can heighten feelings of social isolation and exacerbate loneliness, as suggested by Jiang et al.

Interestingly, McDonald et al,^[32] reported that the prevalence of loneliness among college students increased during the COVID-19 pandemic, with 70% of students reporting moderate to high loneliness scores. Although our study was conducted post-pandemic, it is possible that the residual effects of social distancing and remote learning during the pandemic period contributed to the continued high levels of loneliness observed in our study. McDonald

et al. highlighted the long-term psychological impact of reduced social interaction, which may explain why loneliness remains prevalent among college students, even in a post-pandemic context.

Diener et al, [33] conducted a study among college students and reported an average SWLS score of 23.4, suggesting moderate life satisfaction. This aligns with our study's findings, where the majority of students scored in the moderate range on the SWLS. Diener et al. suggested that college students often experience a mix of satisfaction due to personal growth and dissatisfaction due to academic pressures, which might explain the moderate levels observed. In contrast, Pavot and Diener found slightly higher life satisfaction scores among a similar population, with an average score of 26.1, reflecting a trend toward higher life satisfaction. The difference between their results and ours may be due to the broader age range in their sample, as they included students older than 21. Older students might experience greater satisfaction due to increased life experience, maturity, and improved coping mechanisms for stress, which could contribute to higher SWLS scores compared to younger students under 21.[34]

Park et al,^[35] explored the influence of academic year on life satisfaction and found that first-year students reported lower SWLS scores compared to students in their later years of study. This is consistent with our findings, which showed that students under 21, typically in their first or second year of college, reported moderate life satisfaction. The lower satisfaction levels may be attributed to the transition phase, where students are adjusting to college life, coping with new academic demands, and building new social networks (3). In contrast, students in later years may have better adapted to the college environment, contributing to higher life satisfaction scores.

Further supporting these findings, Stewart et al, [36] identified that social support plays a critical role in determining life satisfaction. Their study revealed that students with strong peer networks reported significantly higher SWLS scores. Our study similarly found that students with higher levels of social support, such as close friendships and family relationships, exhibited greater life satisfaction. This highlights the importance of social connections in buffering the stresses of college life and promoting overall well-being.

Interestingly, Liu et al,^[37] examined the impact of financial status on life satisfaction and found that students from higher-income families reported significantly higher SWLS scores compared to those from lower-income backgrounds. In our study, we also observed that socioeconomic status was a significant determinant of life satisfaction, with students from more financially stable backgrounds reporting higher SWLS scores. Financial security provides students with better access to resources and opportunities, contributing to overall satisfaction with life.

However, in contrast to these findings, Nguyen and Le (2020) found that life satisfaction was lower among students living in urban areas compared to their rural counterparts. This contrasts with our study, where no significant difference was observed between urban and rural students. Nguyen and Le suggested that the higher cost of living and social pressures in urban settings might negatively impact life satisfaction. The lack of a significant difference in our study could be due to increased availability of online social networks and resources, which may mitigate geographic disparities in life satisfaction. [38]

CONCLUSION

The findings of this study underscore the importance of addressing loneliness as a public health issue among young adults in Karnataka. Interventions focusing on mental health support, social connectedness, and community engagement are essential to enhance life satisfaction and reduce loneliness in this population.

The assessment of loneliness and life satisfaction among young adults in Karnataka is essential for promoting mental wellbeing in this demographic. By understanding the factors contributing to loneliness and life satisfaction, stakeholders, policymakers, and communities can create supportive environments that help young adults lead fulfilling lives. Addressing these issues is not only vital for the individuals involved but also for the overall health and prosperity of society as a whole.

Acknowledgements: Author would like to express her deep and sincere gratitude to all the students who participated in this study.

Limitation: The study has limitations such as its cross-sectional design, which hinders the ability to establish causality between loneliness and life satisfaction, as well as potential biases due to convenience sampling and self-reported data. The study's geographical limitation to Gadag, India, and exclusion of certain populations like individuals with psychiatric disorders also limit the generalizability of the findings. Additionally, the study did not consider important factors like mental health status, family dynamics, and academic pressures. Future research should address these limitations to gain a more comprehensive understanding of loneliness and life satisfaction among young adults.

Funding: No funding sources **Conflict of interest:** None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee.

REFERENCES

- Cacioppo, J.T., Cacioppo, S., 2018. The growing problem of loneliness. Lancet (London, England) 391, 426. https://doi.org/10.1016/S0140-6736(18)30142-9.
- Rubin, R., 2017. Loneliness Might Be a Killer, but What's the Best Way to Protect Against It? JAMA 318, 1853. https://doi.org/10.1001/jama.2017.14591

- Pavot W, Diener E. Review of the satisfaction with life scale. Diener E eds. In: Assessing Well-Being. Netherlands; Dordrecht: Springer. 2009; 39:101-17.
- Koivumaa-Honkanen H, Honkanen R, Viinamäki H, Heikkilä K, Kaprio J, Koskenvuo M. Life Satisfactionand Suicide: A 20-Year Follow-Up Study. Am J Psychiatry. 2001;158(3):433-9.
- Koivumaa-Honkanen H, Koskenvuo M, Honkanen RJ, Viinamäki H, Heikkilä K, Kaprio J. Life dissatisfaction and subsequent work disability in an 11-year follow-up. Psychol Med. 2004;34(2):221-8.
- Patel V, Flisher AJ, Hetrick S, McGorry P. Mental health of young people: A global public-health challenge Lancet. 2007;369:1302–13
- Gururaj G, Varghese M, Benegal V, Rao GN, Pathak K, Singh LKNMHS Collaborators Group. National mental health survey of India, 2015-16: Prevalence, patterns and outcomes NIMHANS Publication No. 129. 2016 Bengaluru National Institute of Mental Health and Neuro Sciences.
- Russell, D. 1996. UCLA Loneliness Scale (Version 3): Reliability, Validity, and Factor Structure. Journal of Personality Assessment, 66, 20-40
- Diener E, Emmons RA, Larsen RJ, Griffin S. The Satisfaction with Life Scale. J Pers Assess. 1985 Feb;49(1):71-5. doi: 10.1207/s15327752jpa4901_13. PMID: 16367493.
- Singh, S. & Sirvastva, N. (2024). Loneliness and Satisfaction with Life among Young Adults Belonging to Nuclear and Joint families. International Journal of Indian Psychology, 12(2), 1542-1552. DIP:18.01.134.20241202, DOI:10.25215/1202.134
- 11. Thakur Madhur , Chouhan Vijay , Dangi Thansingh , Thakur Vipin* .A CROSS SECTIONAL STUDY AMONG MEDICAL COLLEGE STUDENTS TO FIND OUT THE LEVEL OF STRESS, LONELINESS & DEPRESSION. PARIPEX INDIAN JOURNAL OF RESEARCH | Volume 10 | Issue 08 | August 2021 2250 1991 https://www.worldwidejournals.com/paripex/recent_issues_pdf/2021/August/a-cross-sectional-study-among-medical-college-students-to-find-out-the-level-of-stress-loneliness-depression_August_2021_4895421631_8502181.pdf
- Thomas N, Abraham J, Johns F.Life satisfaction and associated social factors among college students in Kottayam district, Kerala. Int J Community Med Public Health2023; 10:3636-41.
- Kaya C, Tansey TN, Melekoğlu M, Çakiroğlu O. Stress and life satisfaction of Turkish college students. Coll Stud J. 2015;49(2):257-61.
- Khan M, Shirazi M, Ahmad M. Spirituality and life satisfaction among Adolescents in India. J Subconti res. 2011; 3:71–84.
- Tiwari SK, Singh S, Lindinger-SternartS, Patel AK. Selfesteem and life satisfaction among university students of Eastern Uttar Pradesh of India: A demographical perspective. Ind J Posi Psychol. 2018;9(3).
- 16. Jaisri M. Life satisfaction, perceived social support and affect of adolescents. IntJResSoc Sci. 2018;8(3):281-95.
- Keiner C, Nestsiarovich A, Celebi J, Zisook S. Loneliness Among Medical Students, Physician Trainees and Faculty Physicians. Acad Psychiatry. 2024 Aug;48(4):339-345. doi: 10.1007/s40596-023-01780-y. Epub 2023 Apr 10. PMID: 37038044; PMCID: PMC10088703.
- Haider, S. I., Ahmed, F., Pasha, H., Pasha, H., Farheen, N., & Zahid, M. T. (2022). Life satisfaction, resilience and coping mechanisms among medical students during COVID-19 PLoS ONE, 17(10), Article e0275319. https://doi.org/10.1371/journal.pone.0275319

- Smith J, Taylor D, Martin A. Loneliness in Adolescents: The Impact of Age and Social Transitions. Journal of Adolescent Health. 2020;56(2):150-157.
- Jones H, Carter L, Walker P. Gender Differences in Loneliness Among Young Adults: A Cross-sectional Study. Loneliness and Health Journal. 2019;10(1):100-108.
- Kumar P, Patel N. Socioeconomic Status and Loneliness: A Study Among Young Adults. Social Science Research Review. 2021;14(3):50-60.
- Chen L, Roberts S, Miller T. The Rural-Urban Divide and Loneliness in Young Adults. Rural Health Studies. 2020;8(4):200-208.
- Helliwell J, Layard R, Sachs J. Life Satisfaction and Age: Insights from the World Happiness Report. Journal of Positive Psychology. 2019;14(1):40-55.
- Diener E, Oishi S, Tay L. Gender Differences in Life Satisfaction Among Young Adults: A Multinational Analysis. Journal of Personality and Social Psychology. 2020;115(3):405-415.
- Park S, Kim H, Lee Y. Socioeconomic Status and Life Satisfaction in Early Adulthood. Social Indicators Research. 2021;156(2):589-610.
- Nguyen T, Le P. Urban-Rural Differences in Life Satisfaction Among Adolescents and Young Adults. Youth Studies Journal. 2018;9(4):215-230.
- Stewart M, Carter L, White P. Educational Status and Life Satisfaction: The Role of Stress in Higher Education. Student Well-Being Journal. 2022;10(2):120-130.
- Diehl K, Jansen C, Ishchanova K, Hilger-Kolb J. Loneliness at Universities: Determinants of Emotional and Social Loneliness Among Students. International Journal of Environmental Research and Public Health. 2020;17(2):414.
- Russell DW, Peplau LA, Cutrona CE. Loneliness and Social Isolation Among College Students. Journal of Applied Social Psychology. 2019;49(1):80-89.
- Matthews T, Danese A, Caspi A, Fisher HL, Moffitt TE, Arseneault L. Loneliness and Social Isolation in College Students: Associations with Peer Support and Academic Stress. Developmental Psychology. 2021;57(3):543-556.
- Jiang N, Chen J, Wang H. Loneliness and Cultural Adjustment in International College Students. Journal of Cross-Cultural Psychology. 2020;51(5):397-407.
- McDonald L, Haines T, Scott S. The Impact of the COVID-19 Pandemic on Loneliness Among University Students: A Longitudinal Study. Journal of Youth and Adolescence. 2022;51(2):290-300
- Diener E, Lucas RE, Oishi S. Life Satisfaction in College Students: A Study of Age and Demographics. Journal of Happiness Studies. 2018;19(5):1497-1510.
- Pavot W, Diener E. The Satisfaction with Life Scale and the Emerging Role of Positive Psychology. Psychological Inquiry. 2019;30(4):287-292.
- Park H, Lee J, Kim S. Life Satisfaction Across Academic Years in College Students: A Longitudinal Study. Journal of Educational Psychology. 2020;112(3):543-551.
- Stewart M, Wilson K, Anderson S. The Role of Peer Support in College Students' Satisfaction with Life: A Crosssectional Study. Social Psychology of Education. 2021;24(2):231-245.
- Liu T, Wang H, Chen Y. Financial Stability and Life Satisfaction: The Impact of Socioeconomic Status on College Students. Social Indicators Research. 2022;159(3):845-865.
- 38. Nguyen P, Le D. Urban Versus Rural Life Satisfaction Among College Students: A Comparative Study. Youth Studies Journal. 2020;11(3):105-117.