



ORIGINAL ARTICLE

A COMPARATIVE ANALYSIS OF DAYDREAMING, LONELINESS, AND PERCEIVED SOCIAL SUPPORT IN MEDICAL UNDERGRADUATES

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Background: Loneliness or maladaptive daydreaming (MD) is an emerging phenomenon and perceived social support is possibly protective in this regard. This study was undertaken to assess their relationship in medical students. **Methods:** A comparative cross-sectional study was conducted in Aziz Fatimah Medical and Dental College, Faisalabad, from Jun to Sep 2025. A total of 280 MBBS students were taken using non-probability quota sampling. Standardized tools used were: Maladaptive Daydreaming Scale-Short Form (MD-SF5), UCLA Loneliness Scale, and Perceived Social Support (PSS). Data were analysed using Mann-Whitney U and Kruskal-Wallis H tests on group comparisons; Spearman's correlation for associational studies and binary logistic regression to identify predictors. **Results:** The mean scores of scales observed were: loneliness -1.74 ± 0.44 , perceived social support (PSS) -2.24 ± 0.66 , and maladaptive daydreaming -1.44 ± 0.49 . Gender differences were non-significant for loneliness ($p=0.497$) and maladaptive daydreaming ($p=0.718$), but males reported significantly greater support from friends ($p=0.001$), family ($p=0.005$), and significant others ($p=0.003$). Logistic regression analysis showed that having support from a significant other marginally reduced loneliness (aOR=0.66, $p=0.05$), while friendship support reduced maladaptive daydreaming (aOR=0.39, $p=0.030$). All PSS subscales were negatively correlated with loneliness ($p<0.01$). **Conclusion:** Loneliness and maladaptive daydreaming were not correlated with either gender or year of study. Support from friends and significant others emerged as an important protective factor. However, findings are based on a single institution, limiting generalizability.

Keywords: Daydreaming, loneliness, social support, students

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INTRODUCTION

Maladaptive daydreaming (MD) describes imagination that interferes with the individual's life. It can be defined as 'vivid and immersive daydreaming that significantly disrupts daily life'.¹ Individuals with MD are tied up in fantasy which has pernicious influence on their overall well-being.² Some individuals strive to control daydreaming and some individuals deliberately engage themselves in daydreaming as an attempt to grapple emotional states. Individuals try to bridge the emotional gap through daydreaming. Some individuals visualize true companionship or harmonious family via daydreaming.³

Loneliness is an emotional experience or state which the individual feels when there is gap between social relationships, and wishes he had and what he actually has irrespective to be surrounded by people or not. It can be emotional and social loneliness. Emotional loneliness signifies the absence of emotional attachments and social loneliness considers as absence of social relations. Various mental health problems like anxiety and depression can occur which leads to physical health issues like hypertension, stroke and heart disease.⁴ Loneliness for adults have become the maladaptive coping mechanism to establish their place

in this world. It impairs inter-personals relations and reduces trust on other people.⁵ Social support encompasses the concept of comfort, resilience and peace which a person gets from his family, friends, colleagues and community group. It is a subjective perception that he is cared for, valued and has reliable support within his social network.⁶

Interference of MD in daily life leads to feelings of guilt and can make someone emotionally unavailable. MD is often influenced by lack of social support, those with high level of perceive social support don't need an escape from reality. There are many evidences that have shown that lack of social support can lead to extreme usage of internet and other platforms that have serious consequences on a person's daily life.⁷ Individuals with great parental support are more likely to develop emotional security, effective strategies, high self-regulation skills and rescued needs to escape to imaginary world, also helps to integrate the strategies to cope with the emotional resilience and they don't attract to the maladaptive coping mechanism.⁸ Daydreaming is considered as coping mechanism against the reality especially among the university students who are new to the academic and social pressure being faced in professional studies and find it hard to form new social bond and interactions and

ultimately leads to feelings of loneliness and find their solace in day dreaming their imaginary world in which they are the centre of attention and have their meaningful social bonds.⁹ Medical students, in particular, represent a high-risk group given their prolonged academic demands, competitive environment, and reduced time for social interaction, all of which may heighten vulnerability to loneliness and maladaptive coping strategies such as daydreaming. This study signifies the importance of the perceived social support that acts as buffer against loneliness and ultimately maladaptive day dreaming. It's not just the quantity of social support but the quality of perceived social support that matters the most. Most of the students are unmindful that it has detrimental effects on their academic performance and holistic health. Such a study has not been done in medical schools of Faisalabad. The purpose of this study was to see the prevalence of maladaptive daydreaming among local medical undergraduates.

METHODOLOGY

This comparative cross-sectional study was done in Aziz Fatimah Medical and Dental College, Faisalabad for 4 months from Jun to Sep 2025, utilizing non-probability quota sampling. Ethical clearance was granted vide Ref. No. IEC/366-25. Sample size was calculated for a single population proportion with 95% CI, 5% margin of error, and an estimated prevalence of daydreaming as 34.3%¹⁰. The initial sample size was calculated as 382. Since the total population was finite, the finite population correction (FPC) was applied:

$$n_{adj} = n_0 / 1 + (n_0 - 1) / N = 382 / 1 + (381 / 700) = 247$$

After adjusting for a 10% non-response rate, the final required sample size was estimated at approximately 280 students, so 56 from each class, 28 males and 28 females were recruited for the study. As the study involved a comparative analysis across subgroups, quota sampling allowed for non-random selection, but it still ensured that certain characteristics are proportionately represented in the final sample, and was more feasible given the absence of a complete sampling frame and time constraints.¹¹

Informed consent was obtained from all participants. Students were selected based on voluntary participation until quotas were completed.¹² MBBS students, never diagnosed with any mental health illness were included, while those who were ever diagnosed with any mental health illness, allied health sciences students, and those who didn't give consent were excluded.

To assess MD, Maladaptive Daydreaming Scale (MD-SF5) was used having items with rating scale ranges from 0 to 100% (10 point increments), total score was calculated by taking average of 5 items with mean ≥ 33 indicated possible MD. Loneliness is a

complex human emotion, describing a state of solitude or a lack of meaningful relationships and it was measured on University of California, Los Angeles (UCLA) Loneliness Scale, having 3 items with 3 options each on Likert scale having scoring from 1 to 3 and possible range of scores from 3 to 9 with people scoring 6–9 were classified as 'lonely'. Multidimensional Scale of Perceived Social Support (MSPSS) was used to assess perceived social support having 12 questions on Likert scale with scoring from 1 to 7 from strongly disagree to strongly agree. Three subscales were then made, i.e., significant other, family & friends' subscale and then as per their mean scale score ranges, they were considered as having low support (1–2.9), moderate support (3–5), and high support (5.1–7).

Data was analysed using SPSS-22, and $p \leq 0.05$ was considered statistically significant. The normality of data distribution was assessed using the Shapiro-Wilk test, which showed that all scale scores deviated significantly from normality ($p < 0.05$), therefore non-parametric tests were applied.

Descriptive statistics summarized the key variables as Mean $\pm$ SD. To compare these variables across demographic groups Mann-Whitney U test or Kruskal-Wallis H test was used. To explore predictive relationships, binary logistic regression was used, adjusting for covariates (e.g., age, gender). Bivariate associations between daydreaming, loneliness, and social support were examined using Spearman's rank correlation for non-normal data.

RESULTS

A total of 280 participants were included in the study, with males and females equally represented. The class distribution was also the same, with an equal proportion of participants drawn from each MBBS class. Majority (218, 77.9%) of the students belonged to urban localities, and were day scholars (212, 75.7%). Mean of UCLA loneliness scale was 1.74 ± 0.44 . PSSS scale mean was 2.24 ± 0.66 , and its three dimensions, i.e., significant PSS had 1.61 ± 0.8 , friends PSS had 2.21 ± 0.66 , family PSS had 2.32 ± 0.72 , while MDS was 1.44 ± 0.49 .

Table-1 shows that, on the Mann-Whitney U test, males and females did not differ significantly in loneliness, whereas males reported significantly higher perceived social support than females from significant others ($p = 0.003$), friends ($p = 0.001$), and family ($p = 0.005$).

On the Kruskal-Wallis H test, loneliness ($\chi^2 = 2.33$, $p = 0.676$), perceived social support from significant others ($\chi^2 = 2.05$, $p = 0.727$), friends ($\chi^2 = 2.44$, $p = 0.656$), and family ($\chi^2 = 6.82$, $p = 0.146$), and MDS scores ($\chi^2 = 7.74$, $p = 0.101$) did not differ significantly across years of study. (Table-2).

In the binary logistic regression model, gender, year of study, and perceived support from friends, and family were not significantly associated with loneliness, whereas support from a significant other showed a borderline protective effect (aOR=0.66, 95% CI: 0.44–1.00, $p=0.05$). (Table-3).

In the binary logistic regression model, year of study, gender, and perceived support from significant others, and family were not significantly associated with maladaptive daydreaming, whereas support from friends was significantly protective (aOR=0.39, 95% CI: 0.17–0.92, $p=0.030$). (Table-4).

On Spearman's correlation, loneliness was significantly negatively correlated with perceived support from significant others ($\rho = -0.178$, $p=0.003$), friends ($\rho = -0.172$, $p=0.004$), and family ($\rho = -0.158$, $p=0.008$), whereas loneliness and any support subscale was not significantly correlated with MDS scores. (Table-5).

Table-1: Comparison of loneliness, PSS subscales, and MDS between male and female students

Scale	Gender		Mann-Whitney U	Z	p
	Male	Female			
Loneliness	2 (1)	2 (0)	9450.0	-0.679	0.497
Significant others (PSS)	2 (1)	1 (1)	8042.0	-2.948	0.003
Friends (PSS)	2 (1)	2 (1)	7839.5	-3.207	0.001
Family (PSS)	3 (1)	2 (1)	8076.0	-2.781	0.005
MDS scoring	1 (1)	1 (1)	9590.0	-0.361	0.718

Table-2: Comparison of loneliness, PSS, and maladaptive daydreaming across year of study

Scale	(Year of study)					χ^2 (df=4)	p
	1 st	2 nd	3 rd	4 th	5 th		
Loneliness	2 (1)	2 (1)	2 (1)	2 (1)	2 (1)	2.33	0.676
PSS Significant Others	1 (1)	1 (1)	1 (2)	1 (1)	1 (1)	2.05	0.727
PSS Friends	2 (1)	2 (1)	2 (1)	2 (1)	2 (1)	2.44	0.656
PSS Family	3 (1)	2 (1)	2 (1)	2 (2)	3 (1)	6.82	0.146
MDS Scoring	1 (1)	1 (1)	1 (1)	1 (1)	2 (1)	7.74	0.101

Table-3: Binary logistic regression predicting loneliness among undergraduates

Predictor	B	SE	p	aOR	95% CI for aOR
Year of study	0.065	0.100	0.51	1.07	0.88–1.30
Gender	0.016	0.284	0.95	1.02	0.58–1.77
Significant Other PSS	-0.414	0.211	0.05	0.66	0.44–1.00
Friends PSS	0.021	0.493	0.96	1.02	0.39–2.69
Family PSS	-0.327	0.412	0.43	0.72	0.32–1.62

aOR=Adjusted Odds Ratio, CI=Confidence Interval

Table-4: Binary logistic regression predicting maladaptive daydreaming among undergraduates

Predictor	B	SE	p	aOR	95% CI for aOR
Year of study	0.129	0.088	0.141	1.14	0.96–1.35
Gender (F vs M)	0.029	0.248	0.906	1.03	0.63–1.68
Significant Other PSS	0.159	0.194	0.413	1.17	0.80–1.71
Friends PSS	-0.932	0.430	0.030	0.39	0.17–0.92
Family PSS	0.622	0.350	0.076	1.86	0.94–3.70

aOR=Adjusted Odds Ratio, CI=Confidence Interval

Table-5: Spearman's rank correlation among loneliness, perceived social support subscales, and maladaptive daydreaming

Variable	Loneliness	Significant Other PSS	Friends PSS	Family PSS	MDS Score
Loneliness	1	-0.178*	-0.172*	-0.158*	0.034
Significant Other PSS	-0.178*	1	0.667*	0.476*	-0.024
Friends PSS	-0.172*	0.667*	1	0.844*	-0.080
Family PSS	-0.158*	0.476*	0.844*	1	-0.023
MDS Score	0.034	-0.024	-0.080	-0.023	1

PSS=Perceived Social Support, MDS=Maladaptive Daydreaming Scale, ρ =Spearman's correlation coefficient, * $p<0.01$ (two-tailed)

DISCUSSION

The current research looked at how loneliness, perceived social support, and maladaptive daydreaming interrelate among undergraduate medical students. It showed that neither gender nor academic year significantly moderate loneliness or maladaptive daydreaming; rather, perceived social support (from friends and significant others) was significantly associated with lower loneliness and maladaptive daydreaming.

Consistent with other studies, we found that perceived social support from friends was associated with lower odds of maladaptive daydreaming. This finding is consistent with results in broader populations that consider supportive social networks as a buffer against escape behaviours like excessive daydreaming.¹³ Our result showing that self-perceived support from friends independently lowers the probability of maladaptive daydreaming is consistent with the contemporary evidence placing MD alongside loneliness and other forms of psychological distress.¹¹ Recent longitudinal and large-scale studies have shown that maladaptive daydreaming commonly occurs with and prospectively contributes to loneliness and distress. Since peer support provides significant buffering against both constructs within student populations, increasing social networks could minimize escapist fantasies and disrupt maladaptive cycles involving the with problematic online behaviors.¹⁴ The negative association between the support subscales and loneliness supports more generalized evidence that social bonding works against loneliness.¹⁵

The current findings obtained show that the perceived support from the friends protected against MD which accords with earlier literature on the close association MD has with loneliness and social distress. Daily elevations of MD according to Soffer-Dudek and Somer paralleled very closely the increase in negative affect and social dysfunction, suggesting the role of interpersonal connectedness in buffering the experience of MD.¹⁶ More recent epidemiological evidence tends to indicate loneliness as a strong correlate of MD, thereby suggesting social support as enhancing that buffering against this detrimental effect.⁷ At a more generic level,

the mental health literature supports the fact that peer and friendship support contribute to increased resilience and lowered distress which thus establishes a plausible mechanism by which seen friend support buffers against maladaptive escapist daydreaming.¹⁷ It could be said that the small, protective effect of other people's support beyond that of a spouse against loneliness indicates the specific effect that recordings or other such types of close, emotionally yielding relations will have. Although it is statistically quite weak, it certainly reflects a wider psychological finding that strong emotional ties can reduce loneliness best when social broader networks fall short.¹⁸

There was no significant correlation between maladaptive daydreaming and loneliness or social support. Thus, it might be said that, while the constructs are related, maladaptive daydreaming is a product of different psychopathological or coping mechanisms, as well as loneliness. This actually aligns with Soffer-Dudek and Oh's brief MD screener development that predicts loneliness but sees MD as an independent construct.¹⁹ On a similar note, Chirico *et al*²⁰ observed how MD relates with a bundle of psychopathology dimensions, emotional-regulation deficits, and digital dependencies that clearly define MD as more than mere loneliness.

The restricted cohort of our institution and the supportive environment may have offset such trends but fail to support the inability of our sample to find gender or year-of-study differences in loneliness or MD when compared to some stress-related literature which states that the psychological burden on medical students increases over academic years. PSS subscale showed quite a steep correlation particularly between family and friends which casts light that the social support systems are really interconnected and this nearest reinforces the idea that support received from multi domain may then be mutually reinforcing in protecting or in buffering loneliness.²¹

Staying much broader, digital and behavioural tools are becoming increasingly popular in studying loneliness. Qirtas *et al*²² showed behavioural markers (like mobile phone using patterns) have strong correlations with different aspects of loneliness, leading to potential new avenues of data-informed intervention in student populations. On the clinical side, maladaptive daydreaming is phenomenologically described as an immersive fantasy that disturbs the course of daily functioning.²³ Our findings imply that social support, particularly that coming from friends, may serve as a potential non-medical buffering factor against functional implications of MD.

The present study is limited by its cross-sectional design, reliance on self-reporting measures, and sampling from one institution only. Future longitudinal or experimental studies could clarify causal

pathways, such as whether enhancing friend-based support leads to decreased onset or severity of MD.

The research has added to the differentiation between psychosocial determinants of loneliness and maladaptive daydreaming during medical students. Importantly, gender and academic advancement were not predictive of the outcomes; instead, quality of social support emerged as the more salient factor, especially support coming from friends and significant others. These results call for the development of medical curricula to promote peer support networks and emotionally supportive relationships as protective factors for sustaining mental well-being.

CONCLUSION

Medical students showed comparable levels of maladaptive daydreaming and loneliness. There were notable gender variations in perceived social support, with males reporting higher levels of support on all subscales. Support from friends was associated with lower maladaptive daydreaming, and support from a significant other was associated with reduced loneliness. These results highlight the value of strong interpersonal ties in reducing students' feelings of isolation and maladaptive daydreaming.

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MUD: Methodology, data analysis, Critical review and revision

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ZR: Concept, study design, data collection, writing draft

MRH: Concept, methodology, writing draft

MUK: Data analysis, writing draft

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