

Unseen Health and Social Challenges Among Residential Madrasah Students in Pakistan: A Cross-Sectional Study

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ABSTRACT

Background: Madrasahs are Basic Islamic teaching schools and more often residential Islamic educational institutions that provide religious and basic formal education; however, the health and social conditions of students residing in these settings remain underexplored. Students may experience multiple health and psychosocial challenges, many of which are often underreported.

Methodology: An institution-based cross-sectional study was conducted from January to March 2021 among 271 male students aged 13–19 years residing in a residential Madrasah in Hyderabad Sindh, Pakistan. Participants were selected through convenience sampling. Data were collected using a structured, pretested questionnaire assessing socio-demographic characteristics, Common health problems, social issues, and satisfaction levels. Data were analyzed using SPSS version 26.0. Descriptive statistics were presented as frequencies, percentages, and mean \pm standard deviation. Associations between categorical variables were assessed using the chi-square test, with $p < 0.05$ considered statistically significant.

Results: The mean age of participants was 17.7 ± 1.7 years. A high prevalence of health problems was observed, with only 6.64% reporting no illness and 20.30% experiencing multiple conditions. Approximately 50.55% of participants were satisfied with treatment received during illness. Satisfaction with food provided during illness was significantly associated with willingness to continue residing in the Madrasah ($p < 0.001$). Most participants (96.70%) reported engagement in sports activities.

Conclusion: Despite adequate basic facilities, a considerable burden of health and social challenges persists among residential Madrasah students. Strengthening healthcare access, improving nutritional quality, and addressing psychosocial issues are essential to enhance student well-being.

Keywords: Madrasah, Public health, Student health, Social issues, Satisfaction, Pakistan

INTRODUCTION

Madrasahs are Islamic educational institutions that provide religious instruction grounded in Quranic teachings and Islamic values, serving millions of students across the Muslim world¹. In Pakistan, these institutions play a critical role in offering accessible education, particularly to children from low socioeconomic backgrounds who may otherwise lack opportunities for formal schooling. In addition to education, many madrasahs provide residential facilities, food, and basic necessities, thereby functioning as an important social welfare system for marginalized populations^{2,3}.

Over the past two decades, madrasahs have attracted considerable attention in both academic and policy discourse. While some narratives portray these institutions negatively, emerging evidence suggests that they continue to serve as a vital support system for economically disadvantaged communities⁴. However, despite their social contributions, limited attention has been paid to the overall health and well-being of students residing within these institutions. Residential educational settings, particularly in low- and middle-income countries, are often associated with a range of health challenges due to overcrowding, limited healthcare access, and inadequate health awareness^{5,6}.

Existing literature indicates that students living in institutional settings may experience a high burden of preventable physical health conditions, including gastrointestinal infections, respiratory illnesses, and nutritional deficiencies⁷. Furthermore, restricted social interaction, rigid disciplinary environments, and limited exposure to diverse perspectives may contribute to psychosocial stress, emotional suppression, and behavioral challenges among students^{8,9}. In the context of madrasahs, where formal health education and access to healthcare services are often limited, such issues may remain underreported and insufficiently addressed.

Recent studies have emphasized the need to examine

health disparities among marginalized youth populations in Pakistan and other low-resource settings¹⁰. Despite the large number of students enrolled in madrasahs, empirical research exploring their health and social conditions remains scarce, creating a gap between perception and evidence. Addressing this gap is essential for informing public health interventions and policy frameworks aimed at improving the quality of life and well-being of students in these institutions.

Therefore, the present study aims to assess the prevalence of health and social issues among students residing in a madrasah and to examine their association with satisfaction regarding residential life.

Objectives

1. To assess the health and social challenges faced by students residing in a Madrasah.
2. To assess the level of satisfaction among residential Madrasah students regarding their living conditions.
3. To determine the association between health and social challenges and the level of satisfaction among residential Madrasah students.

MATERIAL AND METHODS

This institution-based descriptive cross-sectional study was conducted at a recognized residential Madrasah located in Latifabad, Hyderabad, Sindh, Pakistan. The institution provides both religious and contemporary education up to the middle level, along with basic computer education, to more than 760 students under the supervision of approximately 40 teachers across five departments. The study was carried out over a period of three months, from January to March 2021, among teenage male students aged 13–19 years residing in the Madrasah and willing to participate. A sample size of 271 was calculated using a prevalence of 19% based on a previous study, with a 95% confidence interval and 5% margin of error, and an additional 10% added to account for incomplete responses. Participants were selected through convenience sampling. Data were collected using a structured questionnaire developed specifically for this study,

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consisting of both closed-ended and a few open-ended questions covering socio-demographic characteristics, health issues (such as illness status, type of illness, treatment, diet, and sleep duration), and social problems (including recreation, punishment, harassment, and willingness to continue residing in the Madrasah). Interviews were conducted in Urdu language by the principal investigator to ensure better understanding and accurate responses. Data were entered into MS Excel for cleaning and subsequently analyzed using SPSS version 26.0. Categorical variables were presented as frequencies and percentages, while quantitative variables were expressed as mean ± standard deviation. The Chi-square test was applied to assess associations, with a p-value of <0.05 considered statistically significant. Ethical approval for the study was obtained from the Liaquat University of Medical & Health Sciences Research Ethics Committee. Prior permission was also taken from the Head of the Madrasah before data collection. The purpose of the study was clearly explained to all participants; written informed consent was obtained from students aged 18 years and above, while assent was taken from younger participants. Confidentiality and anonymity of all participants were strictly maintained throughout the study.

RESULTS

A total of two hundred & seventy one students of Madrasah fulfilled the inclusion criteria and were enrolled in the study. Overall, three hundred & forty students were approached to obtain 171 completely filled questionnaires; the response rate was 79.70%. The mean age of the study participants was 17.72±1.73 years (age range was from 13 to 19 years). Majority (91, 33.60%) of participants belonged to 16 years of age followed by (76, 28.0%) belonged to age 18 years, (68, 25.1%) belonged to 17 years and (36, 13.3%) were of age 19 years as shown in figure 1.

The mean ± standard deviation of duration of stay in the Madrasah was 4.42 ± 0.10 years. The majority of students (59.04%) had been studying in the Madrasah for 4–6 years. More than half of the participants (53.87%) were enrolled at the primary level of education. A considerable proportion (59.82%) had previously studied in another school prior to admission. Regarding future preference, 52.40% of students expressed willingness to continue residing in the Madrasah as shown in table 1.

Only 6.64% of participants reported no health problems. Among those affected, scabies was the most commonly reported condition (16.24%), followed by cough (14.76%), malaria (14.39%) Table 1: Institution-related characteristics of study participants (n=271) , and common cold (13.72%). Other reported conditions included constipation (13.35%), diarrhea (11.86%), and injuries (9.22%). Notably, 20.30% of participants reported experiencing more than one health problems as displayed in table 2.

Table 1: Institution-related characteristics of study participants (n=271)

Variable	Category	Frequency (%)
Duration of study in Madrasah	≤ 3 years	89 (32.84%)
	4–6 years	160 (59.04%)
	7–9 years	22 (8.12%)
Current class of education	Primary level	146 (53.87%)
	Middle level	125 (46.13%)
Previous schooling history	Yes	162 (59.82%)
	No	109 (40.18%)
Willingness to continue residence	Yes	142 (52.40%)
	No	129 (47.60%)

Table 2: Distribution of health problems among study participants (n=271)

Health Problem	Frequency (%)
No health problem	18 (6.64%)
Malaria	39 (14.39%)
Common cold	37 (13.72%)
Cough	40 (14.76%)
Diarrhea	32 (11.86%)
Constipation	36 (13.35%)
Injury	25 (9.22%)
Scabies	44 (16.24%)
More than one health problem	55 (20.30%)

Table 3: Dietary patterns among study participants (n=271)

Variable	Category	Frequency (%)
Number of meals per day	Two	7 (2.58%)
	Three	262 (96.67%)
	Four	2 (0.74%)
Common food items consumed	Pulses (Daal)	74 (27.30%)
	Vegetables	85 (31.37%)
	Chola	93 (34.31%)
	Meat curry	19 (7.01%)

Table 4: Association between health-related factors and willingness to continue residence (n=271)

Variable	Category	Yes	No	p-value
Currently suffering from illness	Yes (253)	133	120	0.83
	No (18)	9	9	
Treatment received during illness	Yes (137)	69	68	0.78
	No (115)	63	52	
	Sometimes (19)	10	9	
Satisfied with food during illness	Yes (112)	91	21	<0.001*
	No (159)	51	108	

*Statistically significant

Table 5: Routine activities among study participants (n=271)

Variable	Category	Frequency (%)
Sleeping hours at night	6 hours	100 (36.90%)
	7 hours	78 (28.78%)
	8 hours	93 (34.31%)
Daytime sleep allowed	Yes	125 (46.13%)
	No	146 (53.87%)
Allowed to watch TV	Yes	100 (36.90%)
	No	171 (63.10%)
Allowed to play sports	Yes	262 (96.70%)
	No	9 (3.30%)

Table 6: Social problems among study participants (n=271)

Variable	Category	Frequency (%)
Punishment experienced	Yes	159 (58.67%)
	No	112 (41.33%)
Type of punishment	Beating	140 (51.66%)
	Scolding	58 (21.40%)
	Extra work	28 (10.33%)
Punishment administered by	Teacher	150 (55.35%)
	Administrator	139 (51.29%)
	Senior staff	142 (52.40%)
	Supporting staff	112 (41.33%)

Table 7: Association of social problems with willingness to continue residence (n=271)

Variable	Category	Yes	No	p-value
Punishment	Yes (159)	55	104	<0.001*
	No (112)	87	25	
Harassment	Yes (142)	79	63	0.06
	No (129)	63	66	
Allowed to report harassment	Yes (92)	66	26	0.04*
	No (50)	37	13	

*Statistically significant

Figure 1: Age wise distribution of study participants (n=271)

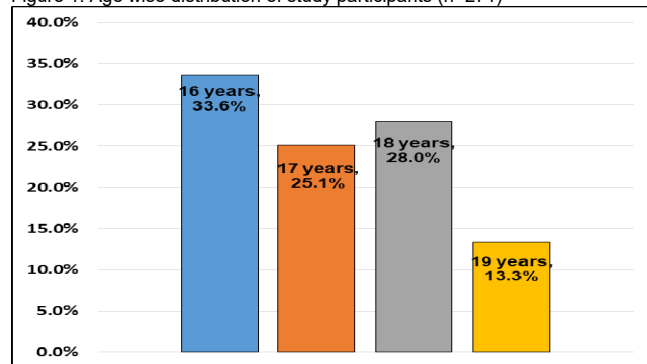


Figure 2: Distribution of Participants According to Treatment Received During Illness

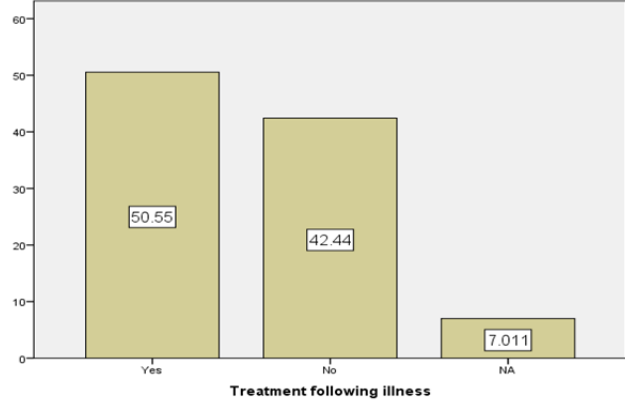


Figure 3: Availability of Rest During Illness among Participants

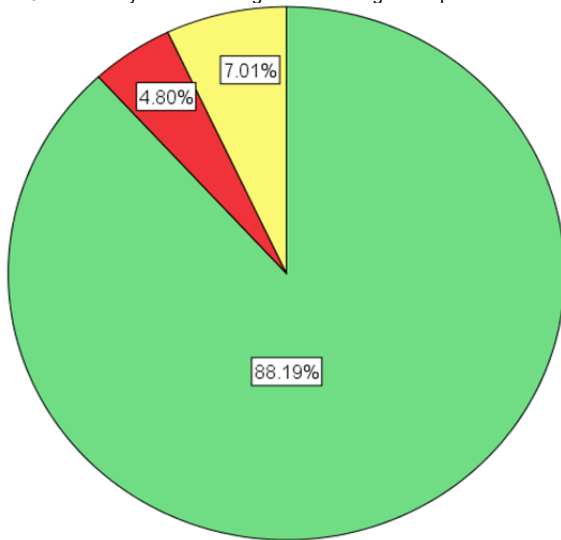
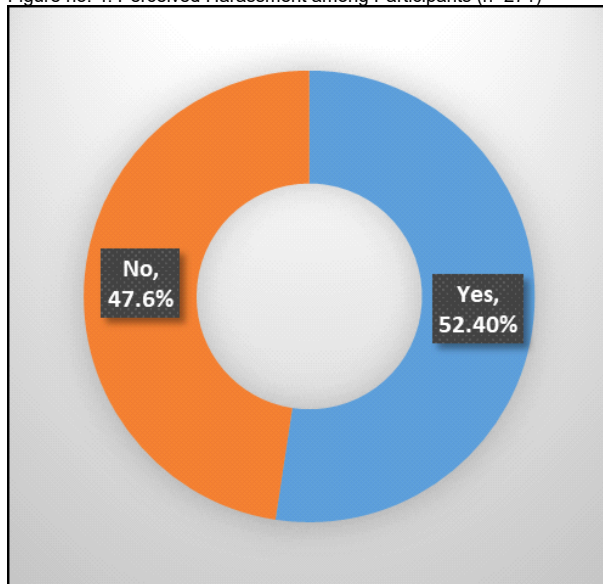


Figure no. 4: Perceived Harassment among Participants (n=271)



Regarding satisfaction with treatment received during illness, slightly more than half of the participants (50.55%) reported being satisfied, while 42.44% expressed dissatisfaction as displayed in Figure.2.

Regarding rest during illness, the majority of participants (88.19%; n=239) reported that they were able to obtain adequate rest, whereas a small proportion (4.80%; n=13) indicated that they did not receive sufficient rest during illness (Figure 3).

The majority of participants (96.67%) reported receiving three meals per day, while only a small proportion reported two meals (2.58%) or four meals (0.74%). Regarding food types, chola (34.31%) and vegetables (31.37%) were the most commonly consumed items, followed by pulses (27.30%) and meat curry (7.01%).

There was no statistically significant association between current illness status (p=0.83) or treatment received (p=0.78) and willingness to continue residing in the Madrasah. However, satisfaction with food provided during illness showed a strong statistically significant association with willingness to continue residence (p < 0.001).

Regarding routine activities, 36.90% of participants reported sleeping for 6 hours at night, while 34.31% slept for 8 hours. About 46.13% were allowed to sleep during the day. The majority (63.10%) were not allowed to watch television; however, almost all participants (96.70%) reported being allowed to engage in sports activities.

More than half of the participants (58.67%) reported experiencing punishment. Among these, beating (51.66%) was the most common type of punishment, followed by scolding (21.40%) and extra work (10.33%). Punishment was most frequently reported to be administered by teachers (55.35%) and senior staff (52.40%).

Asking the students as if they ever felt a feeling of harassment during their studies and living in the madrasah, total 142 (52.40%) students came up with the affirmative response while 129 (47.60%) replied in negative as displayed in figure 4.

Punishment showed a strong statistically significant association with participants' willingness to continue residing in the Madrasah (p < 0.001). In contrast, harassment was not significantly associated with this decision (p = 0.06). However, the ability to report harassment was found to have a significant association with willingness to continue residence (p = 0.04).

DISCUSSION

The present study explored the health and social challenges among residential Madrasah students. The response rate of 79.7% is considered acceptable for cross-sectional studies and comparable to previously reported rates in similar settings^{11,12}. The majority of participants were adolescents, which aligns with findings from regional studies where most Madrasah students fall within the 13–18 years age group¹³.

A notable proportion of students (59.82%) had previous schooling experience, suggesting that Madrasahs may serve as an alternative educational pathway, particularly in socioeconomically constrained populations¹⁴. This reflects the dual role of Madrasahs in both religious and supplementary education systems.

The study revealed a high burden of health problems, with more than 90% of students reporting at least one illness and 20.3% experiencing multiple conditions. Similar findings have been reported in institutional settings where overcrowding, poor hygiene, and limited preventive care contribute to increased morbidity¹⁵. The high prevalence of scabies and respiratory infections further indicates gaps in hygiene practices and environmental health conditions.

Despite this, over half of the participants reported satisfaction with treatment, and a majority (88.19%) indicated adequate rest during illness. This suggests that basic care is available; however, preventive strategies may be lacking. Importantly, satisfaction with food during illness showed a strong

association with willingness to continue residence ($p < 0.001$), highlighting the importance of perceived care quality in institutional satisfaction¹⁸.

In terms of nutrition, although most students received three meals per day, dietary diversity appeared limited, with low intake of protein-rich foods. Previous research has linked such dietary patterns to compromised nutritional status among Madrasah students¹⁷. While access to meals and sweets was adequate, nutritional quality remains an area requiring improvement.

The findings related to routine activities showed that most students were engaged in physical activity, which is a positive indicator of health behavior. However, variations in sleep patterns and restricted recreational activities may influence overall well-being, as supported by studies highlighting the importance of balanced routines in adolescent health¹⁹.

Social issues, particularly punishment and harassment, were significant concerns. More than half of the participants reported experiencing punishment, with physical punishment being the most common. Punishment was significantly associated with willingness to continue residence ($p < 0.001$), which is consistent with findings that disciplinary practices strongly influence students' perceptions and institutional attachment²⁰. Although harassment was reported by a substantial proportion, it was not statistically associated with willingness to continue residence, possibly due to underreporting or normalization of such experiences.

Importantly, the ability to report harassment was significantly associated with willingness to continue residence ($p = 0.04$), emphasizing the need for safe and supportive reporting systems. Previous studies also highlight that a positive and secure environment enhances student retention and well-being²⁰.

CONCLUSION

The study concludes that residential Madrasahs provide a structured environment with adequate basic facilities such as food, rest, and physical activity. However, a high prevalence of health problems, limited dietary diversity, and the presence of social issues such as punishment and harassment indicate important gaps. Students' satisfaction was strongly influenced by the quality of care, particularly food during illness and supportive environments, highlighting the need for improvements in health, nutrition, and psychosocial well-being.

Recommendations: There is a need to strengthen health and hygiene practices in Madrasahs through regular medical check-ups, health education, and improved sanitation. Nutritional quality should be enhanced by ensuring balanced and diverse diets. In addition, child protection policies must be implemented to reduce punishment and prevent harassment, along with establishing safe reporting mechanisms. Training of teachers in positive discipline and psychosocial support is essential. Collaboration with mainstream educational and health systems can further improve the overall well-being and development of students.

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