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Original Article

Mental Health Literacy and its Relationship with Positive Mental Health in Iranian Adolescents

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Abstract

Background: Adolescents' mental health can have significant effects on their well-being; Inadequate Mental Health Literacy (MHL) is also a global concern. The present study investigated Mental Health Literacy and its relationship with positive mental health in Iranian adolescents.

Methods: This cross-sectional study was performed in Saveh, a city in the center of Iran, between April 15, 2023 to May 25, 2023. A total number of 400 adolescents in 8 schools were selected through a multi-stage cluster sampling technique. Mental health literacy and positive mental health were measured using the Mental Health Literacy Questionnaire (KAMHS) and the 14-item Mental Health Continuum Short Form (MHC-SF) questionnaire. The parameters linked to mental health literacy were found using a hierarchical multiple linear regression model. SPSS version 22 was used to analyze the data.

Results: The study results revealed that approximately half of the participants (52.5%) had moderate mental health. The mean and standard deviation of mental health literacy scores were 89 and 8.7, respectively. Gender (P=0.041), father's level of education (P=0.043), mother's level of education (P=0.031), father's employment status (P=0.023), family income (P=0.035), familiarity with those with mental illness (P=0.01), and mental health status (P=0.005) were associated with mental health literacy. Also, results indicated significant differences in MHL (P=0.01) and good mental health behaviors (P=0.04), avoidance coping (P=0.03), and knowledge (P<0.001).

Conclusions: It is essential to implement suitable educational programs to improve the mental health status and mental health literacy of adolescents. The mental health status of individuals can act as a catalyst in promoting mental health literacy.

Keywords: Mental health, Adolescent, Health literacy

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1. Introduction

Adolescence is a crucial developmental stage that includes identity formation and hormonal changes. It can contribute to risk-taking behavior, increase vulnerability or weakness in adolescents, and affect health and well-being (1). The World Health Organization defines adolescence as the age range between 10 and 19. It is a stage of the life that occurs between childhood and adulthood, and is marked by changes in the body and mind that affect perspectives (2). Mental health is when a person realizes their abilities and can effectively deal with typical life's stressors that, in turn, affect the community (3). The global prevalence of mental health issues, especially among adolescents, poses significant challenges. Approximately 10 to 20 percent of adolescents worldwide, including Iran, have experienced mental health problems (4, 5). In a recent study conducted among Iranian adolescents, the prevalence of mental disorders was reported to be 25.1 percent (6).

The advent of positive psychology has given rise to a new way of thinking about mental health. "State of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" is the most recent definition of mental health provided by the World Health Organization (7). These methods emphasize the significance of constructive goals, meaningful activities, positive functioning, and hopeful development of mental health. In this view, an individual's assets and weaknesses are viewed together and should be

combined for a comprehensive mental status evaluation (8).

According to Keyes, mental health necessitates a blend of emotional, psychological, and social well-being. He defined flourishing as a unique condition in which people exhibit high levels of mental health and social and psychological functioning (9). Languishing refers to a condition characterized by low levels of mental health and psychological and social flourishing. Individuals in a state of languishing are neither deteriorating nor thriving; their mental health is average. This definition of low mental health parallels the DSM-IV's definition of depression, which includes both anhedonia (a lack of delight or loss of interest) and reported impairments in functioning (such as appetite and sleep disturbances). Those with robust mental health experience positive functioning and pleasure; those with poor mental health, in contrast, experience diminished delight (10). A study conducted in India revealed that 51% of adolescents were flourishing regarding mental health (11).

Mental Health Literacy (MHL) significantly predicts adolescents' mental health. MHL derives from health literacy and seeks to increase individuals' knowledge of mental health, mental illnesses, and their treatments to promote and enhance MHL (12). MHL is a noteworthy mental health promotion strategy that empowers communities to improve their mental health. Since Jorm and colleagues first defined it in 1997, there have been various interpretations and understandings of Mental Health Literacy (MHL). Recent MHL definitions include four essential elements: 1) gaining and sustaining mental wellness; 2) comprehending mental illnesses and their therapies; 3) diminishing the shame attached to mental illnesses; and 4) asking for assistance (being aware of when, where, and how to get mental healthcare on our own) (12).

Positive emotions or effects, such as a subjective sense of well-being and happiness, a personality trait that includes ideas of self-worth and control, resilience in the face of hardship, and the ability to handle stressors in life, have all been conceptualized as positive mental health (13).

In recent studies, the relationship between mental disorders such as depression and anxiety and MHL has been examined (14, 15), but in the present study, the positive mental health index is examined with MHL among Iranian teenagers, which helps us to understand the condition of these two indicators and their relationship among teenagers.

Previous research in affluent countries has identified adolescents with low to intermediate levels of mental health literacy (5). However, there has not been as much focus on MHL in low- and middle-income nations (16). A recent systematic review has showed that MHL is low in low- and average-income countries (17). Research conducted in the Middle East has revealed low MHL, even among medical professionals (18). Low depression literacy and high stigma in different population groups have also been found in Iran, according to a previous study (19).

Poor mental health can majorly impact public and individual health and behavior. For example, it has been linked to student dropout and dangerous behavior (20). Low MHL prevents adolescents from seeking treatment for mental disorders. A more positive attitude towards mental health and seeking treatment is the outcome of early detection of mental health problems and early intervention (21). In light of the significance of mental health and mental health literacy (MHL) among teenagers, especially considering the limited research conducted in Iran (19), the primary objective of this study was to assess the levels of positive mental health and MHL among adolescents in Saveh, Iran in 2023.

2. Methods

This cross-sectional study was conducted in secondary schools in Saveh, Iran. Four hundred teenagers from secondary schools for boys and girls in Saveh, in the center of Iran, participated in the survey, between April 15, 2023 and May 25, 2023.

Using the G*power software, the study population was estimated to be 341 by considering an effect size of 0.157 (based on a comparable study result (22) and α=0.05, power (1-β)=0.90 at a 95% confidence level). A replacement group consisting of 60 people (given a 20% sample loss) was also added. In the end, 400 teenagers participated in this study. Participants who did not finish filling out the questionnaires were considered eligible to withdraw from the study (at least 20%).

The samples were collected using a multi-stage cluster sampling technique. There are 32 government high schools for female and male students in Saveh, Iran. Initially, we randomly selected 8 schools from the pool of 32 government schools, and randomly chose 50 students from 10th, 11th, and 12th grades of each school to complete the questionnaires.

Following that, a written informed consent was signed by each participant and attached to the surveys. The participants were guaranteed that the data provided would only be used for generating recommendations and conducting research. On the interview forms, participants may choose to include their identities just for monitoring and follow-up. In the process of analyzing the data and summarizing the findings, all information was anonymized to ensure confidentiality. In order to ensure ethical standards in the first phase, the researchers contacted Saveh Bureau of Education. After receiving the authorization letter, the researchers visited the schools and interviewed the principals to arrange the date of school visit. The researchers then provided an introduction, explained the purpose of the study, guaranteed data privacy, invited eligible participants, and provided instructions on how to complete the surveys. The researchers arranged the students and gave them 20 minutes to complete the questionnaires.

2.1. Data Collection Tools

The data collection tools consisted of a demographic information form, the Mental Health Literacy Questionnaire (KAMHS), and the Mental Health Continuum-Short Form questionnaire.

The demographic information form included questions about age, gender, parents' level of education, parents' occupation, parental divorce status, knowledge of individuals with a history of mental illness, and household income.

The Mental Health Literacy Questionnaire (KAMHS) was designed and evaluated by Simkiss and colleagues in 2021 (23). To evaluate mental health literacy across six domains—knowledge (12 items), good mental health behaviors (6 items), lack of stigma (6 items), lack of self-stigma (6 items), lack of avoidant coping (5 items), and help-seeking behaviors (7 items)—children and adolescents between the ages of 11 and 16 are asked to complete KAMHS. Scales 3-5 were classified as "none." The responses ranged from "strongly disagree" to "strongly agree" on a five-point scale. "Strongly disagree" would receive 0 points, and "strongly agree" would receive 4 points if it was the correct response. The possible scores are 0 - 168. Consequently, higher scores on all subscales indicate better mental health literacy. Psychometric properties of the questionnaire have been demonstrated (23). The original KAMHS was translated into Persian using forward-backward techniques. Two separate translators translated the questionnaire into Persian. After that, one of the writers and the two translators compared the two Persian versions to reach consensus on a single, provisional Persian translation. In the back-translation stage, the tentative Persian translation was translated back into English by two other English translators who must be made aware of the original version. The original questionnaire and the back-translation versions were strikingly comparable. Two relative validity coefficients, Content Validity Ratio (CVR) and Content Validity Index (CVI), were used to evaluate the quantitative content validity based on the judgments of fifteen experts in clinical psychology (eight experts) and health education (seven experts). Given the CVR index, derived from Lawshe's table, all items were evaluated as necessary (CVR=0.602).

Furthermore, all items had a CVI above 0.79 in terms of relevance, simplicity, and clarity. To assess reliability, in a preliminary study, a group of twenty individuals responded to the questionnaire items at a ten-day interval. The Intraclass Correlation Coefficient (ICC) for accord between the first and second administrations was 0.86. The coefficient of stability, derived through test-retest measurements, was 0.92. Cronbach's alpha coefficient was used to investigate the internal consistency of the items. The calculated alpha values for the domains of Good Mental Health Behaviors (0.73), Self-stigma lack of (0.75), Stigma lack of (0.81), Lack of avoidant coping (0.71), and Help-seeking behaviors (0.78) were confirmed.

2.1.1. Short Form Mental Health Continuum Questionnaire: Singh and colleagues developed the 14-item Mental Health Continuum Short Form (MHC-SF) questionnaire based on the 40-item Mental Health Continuum scale (24). This questionnaire covers the domains of emotional, psychological, and social well-being and consists

of fourteen items. On a Likert scale ranging from "Never" (0) to "Every day" (5), each item was given a grade. MHC-SF is used to evaluate mental health, flourishing, and languishing by Keyes' theory of mental health (10). Both adults and teenagers can take this survey. The positive mental health score is calculated as the sum of emotional, psychological, and social well-being scores. The range of possible MHC-SF total scores is 0–70. Higher scores correspond to greater psychological well-being (10). Conversely, classified score system of Keyes (9) comprises three distinct diagnoses, namely thriving, moderate, and poor mental health. A predefined cutoff point for each subscale, based on several dependent factors, is used to assign points in this scoring system. It, therefore, depends on the individual subscale scores rather than a cumulative score. If at least six of the eleven items of social and psychological well-being and at least one of the three items of emotional well-being were scored as 0 (never) or 1 (once or twice) in the previous month, the individual is diagnosed with poor mental health. On the other hand, thriving mental health is defined as having at least six of the eleven items and one of the three psychological well-being items graded as 4 (almost every day) or 5 (every day) in the preceding month. People who do not fit the model of poverty or success are thought to be in good mental health (11). Yousefi Afrashteh and colleagues validated this survey in Iran (25). We assessed face and content validity of the questionnaire both qualitatively and quantitatively. CVR and CVI values for every question ranged from 0.80 to 0.98. Acceptable fit indices were obtained using confirmatory factor analysis. The results showed that MHC-SF-A subscales had internal consistency, discriminant validity, and convergent validity (25).

2.2. Statistical Analysis

This study used the SPSS version 22 to perform a series of descriptive and bivariate statistical tests. Descriptive indices (mean, standard deviation, and frequency) were employed to measure sociodemographic characteristics, MHL level, and positive mental health. The one-way ANOVA test was used to determine group differences among MHL variables. Hierarchical multiple regression analysis examined the empirical correlation between MHL, positive mental health, and sociodemographic variables. All variables were included in the study based on logical and theoretical considerations. P value less than 0.05 indicated statistical differences among different groups.

3. Results

The findings of this study revealed that the mean age of the participants was 15.7±2.3. The frequency

Table 1: Socio-demographic characteristics of the study participants, N=400

Variables	Classification	Number	Percent/standard deviation
Gender	Girl	198	49.5
	Boy	202	50.5
Family income	Good	50	12.5
	Moderate	263	65.7
	Low	87	21.7
Had known someone with mental illness	Yes	78	21.7
	No/I don't know	322	80.5
Father's job	Employee	82	20.5
	Worker	125	31.2
	Others	193	47.5
Mother's job	Employed	68	17.0
	Housewife	332	83.0
Mother's educational level	Diploma/under diploma	327	81.7
	College education	73	18.2
Father's educational level	Diploma/under diploma	316	79.0
	College education	84	21.0
Parents are separated	Yes	30	07.5
	No	370	92.5
Number of siblings	One or less	230	57.5
	Two or more	170	42.5
Age	Average age	15.7	2.3

of female students (49.5%) was slightly lower than male ones (50.5%). The level of education of both fathers and mothers was mostly a high school diploma or lower (79% and 81.7%, respectively). Totally, 78.2% reported a moderate economic status. The majority of the participants (80.5%) were not aware of any history of mental disorders in their family (Table 1).

Approximately half of the participants (52.5%) had moderate mental health (Table 2). The mean±standard deviation of the overall mental health literacy in the community was 89.8±8.7. As shown in Table 3, the results of the one-way ANOVA test indicated significant differences in MHL (P=0.01) and the domains of Good mental health behaviors (P=0.04) and avoidance coping (P=0.03) and Knowledge (P<0.001) across different mental health statuses.

Based on stepwise multiple linear regression analysis, in the first stage, demographic variables such as gender (P=0.041, β=1.98), father's level of education(P=0.043, β=1.86), mother's level of education(P=0.031, β=2.62), father's employment status (P=0.023, β=2.34), family income (P=0.035, β=2.29), familiarity with those with mental illness (P=0.01, β=4.31), and mental health status (P=0.005, β=5.65) were associated with MHL in students. As shown in Table 4, the components of a family history of mental disorders and mental health status were included.

Table 2: Mental health status of the adolescents

Mental health*	Proportion (95% CI)
Flourishing (Positive mental health)	29.3 (25.5-33.8)
Moderate mentally healthy	52.7 (41.3-49.8)
Languishing	18.0 (22.6-29.8)

CI: Confidence Interval

Table 3: Comparison of mental health literacy variables in different mental health status of the adolescents

	Minimum	Maximum	Median	Total Mean±SD	Languishing Mean±SD	Moderate mentally healthy Mean±SD	Flourishing Mean±SD	P value
Knowledge	0	48	24	28.2±4.6	25.2±3.7	26.9±3.5	35.0±5.8	<0.001*
Good Mental Health Behaviors	0	24	12	14.4±3.4	13.1±2.3	16.3±2.5	18.6±2.4	0.04*
Self-stigma	0	24	12	13.3±3.1	13.9±3.2	13.3±2.8	13.3±2.9	0.33
Stigma	0	24	12	13.1±2.4	13.1±2.3	13.3±2.1	13.3±2.3	0.29
Avoidant Coping	0	20	10	7.3±1.8	6.5±1.9	7.9±1.8	9.4±1.5	0.03*
Help-seeking behaviors	0	28	14	11.0±2.1	10.8±2.0	11.1±1.9	10.4±1.9	0.41
Mental health literacy	0	168	84	89.8±8.7	82.9±6.9	87.5±7.3	99.3±8.9	0.01*

*P<0/05, SD: Standard Deviation

Table 4: Hierarchical linear regression for prediction of mental health literacy through demographic characteristics

Determinants	ß	SE	P value
Block 1: Demographics			
Age	0.22	0.38	0.216
Gender (Male vs Female)	1.98*	1.12	0.041
Number of siblings (one or less vs two or more)	0.09	0.25	0.539
Family Income			
(Low vs Moderate)	0.38	0.69	0.160
(Low vs High)	2.29*	1.98	0.035
Father's educational level (Diploma/under diploma vs College education)	1.86*	1.71	0.043
Mother's educational level (Diploma/under diploma vs College education)	2.620*	2.94	0.031
Father is Working			
(Worker vs Employee)	0.86	0.60	0.128
(Worker vs Others)	2.34*	1.73	0.023
Mother is Working (Housewife vs Employed)	0.98	0.89	0.096
Parents are separated (No vs Yes)	-1.16	1.39	0.075
Model characteristics	R2=12.0%, F=4.55, P=0.02		
Block 2			
Had known someone with mental illness (No/I don't know vs yes)	4.31*	5.18	0.01
Mental health status	5.65	3.20	0.005
Model characteristics	R2=20.9%, F=6.68, P=0.005		

*P<0/05, SE: Standard Error

4. Discussion

This study investigated positive mental health and MHL among adolescents in Saveh, Iran in 2022. The results of this study showed that variables such as gender, parental education, family income, paternal occupation, mental health status, and having known someone with a mental illness were associated with mental health literacy (MHL). According to our findings, 52.7% of the teenagers had moderate mental health. This is in line with a similar study by Arikrishnan and colleagues (11) from India and Solhi and co-workers (26) from Iran, where about half of the participants had moderate mental health. Furthermore, the act is a cautionary tale to emphasize the importance of paying closer attention to Iranian teenagers' mental health.

The level of Mental Health Literacy (MHL) among adolescents in this study was not appropriate, even though there is no norm for MHL in Iranian communities. Respondents scored nearly half of what is required on the MHL questionnaire. These findings were consistent with the known low MHL prevalence in the Middle East and developing nations (17, 27). Diverse investigations indicated that MHL levels are inadequate in diverse Iranian population (19). Recent research on Iranian university students revealed a higher level of MHL (28), which may be attributed to disparities in the target population and MHL questionnaires.

According to the findings of this study, help-seeking behaviors among Iranian adolescents were below average. The majority of adolescents in this study believed they attempted to hide their mental problems from others, in study by Koutra and co-workers, the high level of stigma among adolescents was one of the factors affecting low help-seeking behaviors (29). In addition, more than half of the adolescents in this study believed that they could not readily discuss mental and psychological issues with their teachers or school counselors. Due to the heavy academic demands of high school students, teachers typically lack the time to address student concerns. Due to the significance of university entrance exams in Iran, numerous school counseling activities are centered on this topic (30). Therefore, it is appropriate for school counselors to focus on improving adolescents' MHL rather than providing academic counseling.

The results of our study demonstrated that the participants had acceptable knowledge regarding good mental health behaviors and mental health, which aligned with the findings of Mahmoodi and colleagues (28). This result was expected since in most schools in Iran, various life skills (Ten Life Skills for Mental Health) are taught by school counselors and health center counselors at different educational stages.

The idea of stigma is founded based on misconceptions about mental health and seeking professional assistance, among other aspects of mental health and lifestyle (MHL). In other words, it is common for those who have mental illness to be seen as hazardous and even to be held accountable for it (31). It may be concluded that the amount of stigma surrounding mental diseases and self-image in adolescents is unsatisfactory because their scores on the lack of stigma and lack of self-stigma were almost equal. In our study, nearly half of the teenagers held incorrect assumptions about those who have mental illness. The findings of the present study were consistent with those of Saudi Arabian (32). According to a review of previous research conducted in Singapore, the majority of respondents thought that those who struggled with mental health issues were dangerous. Lack of understanding of mental illness is typically the main cause of this stigma (33). Cultural factors are another effective factor in creating stigma in developing countries (34). Several issues, including the religious-traditional background, have delayed or stopped many studies related to mental health issues, including the impact of stigma on mental illness in the Middle East region (35). Accordingly, students must get information about mental illnesses through school and reliable sources. One of the best reliable sources is holding training sessions by school counselors.

Adolescents' scores for avoidant coping assessment were below average. Many teenagers thought that ignoring problems and waiting for them to go away was the best approach to cope with them. The findings of this study were consistent with a study carried out in India by Parikh and co-workers (36). According to the findings of a recent study, over half of the teenagers in Iran had typical signs of stress, anxiety, and depression (37). When facing stressful situations in life, choosing appropriate coping styles based on past experiences and available resources is crucial for individuals. Therefore, given the high prevalence of anxiety

and depression, interventions aimed at improving effective individual coping strategies appear to be essential.

The study findings showed that, in comparison with other groups, teenagers with flourishing mental health status had considerably higher knowledge, healthy mental health behaviors, and avoidant coping components. In addition to the findings of this study, Mo and colleagues also showed that avoidant coping and mental health behaviors are two essential components of improving mental health status (38).

This study reported that gender is a significant determinant factor of MHL (Mental Health Literacy) among adolescents. Similar findings were reported among adolescents in different countries, such as Portugal (39) and Norway (12). However, this result was not consistent in Iranian student samples (28). To explain this difference in the findings, it can be hypothesized that higher education may enhance MHL in male students. Household income and parental level of education were identified as determining factors of MHL among adolescents. It is consistent with the findings of a study carried out by Abonassir and colleagues (32). The relationship between adolescent MHL and their parents' employment may be related to the better financial status of working parents, given that many mental health services require copayments. According to the results of an Ethiopian study by Tariku Seboku and colleagues, having a family member with a mental illness or having experienced mental illness is linked to the prevalence of MHL among students (40). Intimate acquaintance with individuals with mental illness can illuminate numerous accurate insights and increase MHL. Another factor associated with MHL was mental health status. However, the study conducted by Bahrami and co-workers (19) was against the results of this study. One of the possible explanations for this discrepancy was the use of a different MHL questionnaire in the study by Bahrami and co-workers (19).

4.1. Limitations

There are some limitations in the study. The cross-sectional approach of this study eliminates the possibility of variable causation. Also, the study sample was limited to junior high school students. So, the conclusions drawn from this study may not be directly generalized to students in different educational contexts outside the limited sample size used in this study. Another limitation was related to using a questionnaire to collect the data. Questionnaires alone do not perform an accurate evaluation of the mental health of adolescents; therefore, it is recommended that future studies use more accurate techniques, such as interviews, to evaluate the mental health of adolescents.

5. Conclusions

The findings showed that approximately 25% of Iranian teenagers did not have adequate mental health. Mental health literacy (MHL) was found to be correlated with factors like gender, parental education, family income, father's occupation, mental health status, and having known someone with a mental illness. Teenagers in Iran had a low level of mental health literacy, which emphasizes the need for essential education that focuses on student populations. The results of this study have potential applications in future planning, service quality improvement, and educational material development to address the current gaps in mental health status and health literacy.

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Authors' Contribution

Zahra Saboohi: Significant contribution to the idea and design of the work, obtaining, analyzing, and interpreting data, drafting the paper and critically revising the manuscript. Mahsa Nazarnia: Substantial contributions to the idea and design of the work, collecting, analyzing and interpreting data, critically revising the manuscript. Fateme Gudarzi: Gathering, evaluating, and interpreting data, drafting the paper and critically revising the manuscript. Leila Roodaki: Significant contribution to the idea or layout of the project, obtaining, analyzing, and interpreting data, drafting the paper and critically revising the manuscript. Roqhayeh Nouri: Gathering, evaluating, and interpreting data for the project, drafting the paper and critically revising the manuscript. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such as the questions related to the accuracy or

integrity of any part of the work.

Ethical Approval

The research was approved by the Ethics Committee of Iran University of Medical Sciences with the code of IR.IUMS.REC.1401.713. Also, written informed consent was obtained from the participants.

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