Original Article

Important Systemic Factors for Improving Adolescent Mental Health Literacy

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Abstract

Objective: Mental health literacy is especially important during adolescence and youth, because the peak of the onset of mental disorders occurs in this period. The present study aimed to identify the effective systemic factors for improving Iranian adolescent mental health literacy from the Perspective of policymakers and experts.

Method: This qualitative study was performed on 21 policymakers and health literacy/mental health experts since May 2020 to September 2020 in the workplace of the interviewees in Tehran. Purposive sampling (snowball method) was conducted based on experience, expertise, and the willingness to participate in an interview. All interviews were conducted with the presence of the interviewer at the interviewees' workplace in Tehran. The data were collected through semi-structured interviews and analyzed via the conventional content analysis method.

Results: Five themes were extracted as systemic factors for improving adolescent mental health literacy. Themes were "mental health literacy training", "integration and coordination of stakeholder organizations", "resources and facilities", "continuous assessment" and "provision of information."

Conclusion: Before policy-making and planning to enhance adolescents' knowledge and awareness of mental health issues, it is necessary to attract policymakers' attention to the macro level and identify direct and indirect strategies for the correct implementation of policies adopted in this field.

Key words: *Adolescent; Health Literacy; Health Policy; Mental Health*

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The foundations of creating a healthy society in the future are formed during the important period of adolescence (1). During this period, adolescents face challenges and opportunities to promote health (2). Thus, Adolescence is a critical period for the promotion of mental health and for prevention, early detection and effective treatment of mental disorders, which may, in the short or long term, significantly improve the educational, social, family, and interpersonal status of adolescents (3). Globally, almost one in five adolescents before the age of 25 experience a mental disorder (4).

The population of Iran is more than 75 million people, of which more than 31% (about 23.4 million) are young people under the age of 20. Based on epidemiological data, mental and behavioral health problems are thought to be common among Iranian children and adolescents (5, 6). Although there are evidence-based therapies, a large number of young people with mental health problems are not identified and treated (7). This may be due to reasons such as lack of knowledge about mental health and mental disorders, mental illness stigma, and limited access to appropriate mental health services (8). Some barriers may be addressed by improving the mental health literacy of young people, which reflects the improvement of mental health knowledge and attitudes toward mental illnesses, and thus increases the help-seeking behavior (7, 8).

Mental health literacy is a new, important and necessary factor in health promotion and prevention that originates from health literacy (8, 9). Health literacy is defined as understanding how to achieve and maintain positive mental health, understanding mental disorders and how to treat them, reducing stigma related to mental disorders and increasing the impact of help-seeking (knowing when and where to seek help) (10). Recently, the government has considered the promotion of mental health literacy. Mental health literacy is considered as one of the ten most important issues and its promotion in all population groups is considered as one of the three basic strategies of the government to improve mental health in Iran (11).

Most recent studies have used educational interventions to promote mental health literacy, reduce fear of stigma, and increase professional help-seeking behaviors in adolescents (12-14). Several previous studies have focused on barriers to help-seeking for mental disorders (15-18). In Iran, not much research has been done on adolescent mental health literacy. Most cross-sectional studies have examined the level of mental health literacy of individuals (19-21) or the relationship between mental health literacy and variables such as general health (22) and health-promoting behaviors (23). In one study, inhibitory factors promoting mental health literacy in Iranian adolescents were identified (24). No study was found to examine the required infrastructure and macro factors for improving adolescent mental health literacy. Given the importance of adolescent mental health literacy and the need to identify the factors affecting the better implementation of adolescent mental health literacy interventions at the macro level, the present study was designed to identify the major influential factors in improving adolescent mental health literacy in Iran.

Materials and Methods

Study design

The method used in the present study was content analysis. This qualitative study was performed on 21 policymakers and health literacy/mental health experts since May 2020 to September 2020 in the workplace of the interviewees in Tehran. Purposive sampling (snowball method) was conducted based on participants' experience, expertise, and willingness to participate in an interview. Participants were selected from among specialists or researchers in the field of health literacy or mental health and policymakers in the field of health or mental health of Iranian adolescents (in the Ministries of Health, Education, Welfare, and Sports and Youth as well as in the Broadcasting and the Tehran Municipality). The inclusion criteria for recruiting these people included: having at least a master's or doctoral degree; having at least three years of experience in the field of health literacy or mental health; or having an executive responsibility in this field in the past five years. The interview guide was developed based on the objectives of the study, under the supervision of the research team and five health literacy and mental health specialists. The face validity of the interview guide was reviewed and confirmed by the research team members. To assess the content validity of the interview guide, four pilot interviews were conducted, whose participants were considered as part of the study sample with the approval of the research team.

The interviews were conducted face to face by A. SH, who is a faculty member with the experience of conducting a qualitative study. The transcript was recorded using a voice recorder. For each question, in the end, the interviewer provided a summary of the interviewees' statements to avoid misunderstandings. The first question was about the demographic characteristics of the interviewees. After that, it was asked: In your opinion, what services or interventions have been provided, with the help of which institutions or groups, in the field of promoting adolescent mental health literacy? What are the macro barriers (economic, social, and cultural) in providing mental health information to Iranian adolescents? What infrastructure, measures, and facilitator factors will help to improve adolescents' mental health literacy? What is the role of family and parents in this regard? What services or interventions have been provided in this country to increase the individual skills of adolescents to obtain valid mental health information? And what should be done? The duration of the interviews ranged from 45 to 120 minutes. The mean and standard deviation of the

interview length were 62.33±18.81 minutes. Interviews continued until the responses reached saturation. All interviewees signed an informed consent form.

Data analysis

In the present study, researchers used Consolidated Criteria for Reporting Qualitative studies (25) to report this research. An inductive approach was used to analyze the data. Transcripts of the interviews were coded by MaxQDA 10 software. The conventional content analysis method was used to analyze the data. (26). Two researchers (A. SH and A. A) Performed the coding of transcripts. Each researcher coded the data separately. The coefficient of agreement between the coders was acceptable. The transcripts were read several times. Using open coding, related phrases were identified and summarized based on the purpose of the study in notes. Notes reflecting the same context were combined to form the preliminary categories. Then the overlap or similarity of the extracted categories was investigated and, based on the result, the data were divided into categories and subcategories. If necessary, the categories and subcategories were redefined or corrected. The transcripts were continuously compared with the extracted categories and subcategories to ensure the accuracy of the coding based on the purpose of the study. During the text coding and classification, meetings were held with members of the research team to review and revise the extracted codes and the primary classes and to modify existing codes or create new ones.

Accuracy and validity of data

In this study, the criteria proposed by Guba and Lincoln (1981) were used to evaluate the data (27). The researchers of the present study tried to gather valid information, in addition to increasing the validity of the research by interacting enough with the interviewees to confirm the information obtained. To increase the dependability of the data, the codes were carefully reviewed and modified by the research team as well as several faculty members. To achieve conformability, expert opinions were used to supplement or confirm the codes. To increase the data transferability, the research results were richly reported for evaluation and application in other research.

Ethical considerations

Ethical approval of this study was provided by the ethics committee of the Iran University of Medical Sciences (IR.IUMS.REC NO.97-3-37-12719). In addition to obtaining informed consent, the participant's freedom to interrupt or leave the interview was recalled.

Results

21 policymakers and specialists in the fields of health and mental health were interviewed. 11interviewees (52%) were in the age range of 41-50 years,14 interviewees (67%) were female, 9 interviewees (43%) were working in the field of Clinical Psychology, 9 interviewees (43%) had 11-20 years of work experience, 14 interviewees (67%) were faculty members and 16 interviewees (76%) had a Ph.D. The details are presented in Table 1.

Table 1. Demographic Characteristics of the Participants in the Study to Identify the Important Systematic Factors for Improving Adolescents' Mental Health Literacy (n = 21)

Characteristic	Items	No%
Age	30-40	6(28)
	41-50	11(52)
	51-60	2(10)
	More than 61	2(10)
Gender	Female	14(67)
	Male	7(33)
Field of study	Clinical Psychology	9(43)
	Medical Library	3(13)
	Social Medicine	3(13)
	Psychiatry	2(8)
	Others	2(8)
Education	Masters	5(24)
	PhD	16(76)
Job position	Faculty member	14(67)
	Policymaker	7(33)
Work experience	10 years and less	6(28)
	20-11 years	9(43)
	21-30 years	4(19)
	31 years and more	2(10)

Systemic factors in improving adolescent mental health literacy

Based on data analysis, five themes, including, 1. Mental health literacy training, 2. Integration and coordination of stakeholder organizations 3. Resources and facilities

4. Continuous assessment 5. Provision of information, were identified as systemic factors that are effective in improving adolescents' mental health literacy. The categories and subcategories identified as systematic factors are presented in Table 2.

Table 2. Systemic Factors for Improving Adolescent Mental Health Literacy from the Perspective of Policymakers and Experts

NO	Categories	Subcategories
1	Mental health literacy training	Use various educational platforms
		Use effective educational methods
		Employ specialized and trained trainers
		Provide relevant and curriculum-based educational content
		Design a safe and attractive educational space
2	Integration and coordination of stakeholder organizations	Interaction and cooperation of organizations
		Existence of a single trustee organization
		Provision of long-term educational interventions
3	Resources and facilities	Budget allocation and management
		Balance of facilities and specialized manpower
		Increase available information resources
4	Continuous assessment	Performance of needs assessment and prioritization
		Evaluation of mental health literacy services
		Research in mental health literacy services
5	Provision of information	Providing information about mental health literacy programs and policies
		Providing information about mental health literacy services

1. Mental health literacy training

Providing educational content through various educational platforms such as school, television/movie/theater, internet/social media/mobile applications allows all adolescents to benefit from mental health literacy education. A large number of interviewees mentioned the provision of mental health literacy services through these platforms. An interviewee stated:

"So we need to plan and have contents that are [made available] both in print and non-print forms; because, low-income people may be more involved with print sources. And also, we can provide them to interested people through applications and systems." (K. M)

Several interviewees emphasized the use of effective methods such as interactive and participatory methods, peer education, role-playing and theater, the use of ideas and start-ups, and new communication and information tools and technologies to improve adolescent mental health literacy. An interviewee stated, "Using modern technologies and startups as engines to activate mental health literacy in our country can be useful." (V. S) Another interviewee said, "Using games is helpful. A UNICEF book has been translated [which is] about teaching concepts in the form of age-appropriate games." (L. M)

The use of trained educators who are familiar with teaching techniques and have capabilities such as attractive expression and have specialized knowledge about mental health was raised by the interviewees as an effective factor in the process of teaching mental health issues. An interviewee stated,

"A serious restructuring must take place in the executive posts, and you now have the job of a school counselor, but for a few students! ... A psychologist can train several teachers and they lead group teaching and group discussions." (Z. M)

In interviews with policymakers/experts, educational curriculum modification and presentation of standardized and localized content that is also short and attractive were identified as features of educational content for teaching adolescent mental health literacy. An interviewee stated, "It must be localized and prepared in a very simple package; then it can be transferred to society for any stratum and any social class ..." (AR. S)

2. Integration and coordination of stakeholder organizations

Providing comprehensive programs to improve adolescent mental health literacy requires the interaction and cooperation of all stakeholder organizations. Based on the results, a large number of policymakers and health professionals emphasized the necessity of

interaction and cooperation between stakeholder organizations and the prevention of island and parallel work. An interviewee stated:

"In policymaking, everyone claims, but in implementation, they disclaim any responsibility and the main challenge that can (and should) be addressed is the island performance of organizations. It (each organization) only does the work on itself, if it is doing any work. Access levels and access systems are not addressed under a common policy [between organizations] and each of the related organizations act independently." (V. S)

Based on the findings, a large number of policymakers and experts emphasized the necessity of the existence of a single trustee organization to coordinate and prevent duplication of work in stakeholder organizations. An interviewee stated,

"There is no really good trustee in society and no one can be held accountable. An organization should become the main trustee and put all the organizations together and say that we intend to make a policy in this field until next year." (M. S)

Providing long-term educational interventions in the learning process leads to better and possibly lifelong learning in adolescents. In the process of interviewing policymakers and experts, long-term mental health literacy interventions were identified as an effective factor. An interviewee stated, "Programs should not be cross-sectional and short-term; rather, they should be long-term because short programs are useless" (B. M).

3. Resources and facilities

Before planning and implementing successful programs and interventions, adequate funding is required to implement these programs. This issue is important in planning adolescent mental health literacy promotion programs. In interviews with policymakers and experts, budget issues such as budget management and adequate funding were identified as effective factors. For example, this is what one interviewee said about budget management and guidance and neglect of the prevention of treatment versus treatment,

"Psychiatric issues, because they are not so clearly related to people and tangible, naturally go to the last priority, and vital things are given higher priority. When you have a small budget, you can allocate it to [the program], and when there is no budget, many projects have to be stopped for now." (Sh. S)

Also, about the shortage of manpower, another interviewee said, "You have to think in terms of how much mental health services your target population needs, and then who are the providers who want to provide services for them, and they are certainly not equal." (A. M)

The imbalance of facilities such as educational space, specialized staff, etc. in different parts of the country, especially in deprived areas and areas that are far from the capital, is a factor that can affect the provision of mental health literacy services for adolescents. An interviewee stated, "It may be necessary for us to have a more colorful educational space, and these facilities are not available everywhere, and even in some places in our centers, we may not have a suitable educational space." (H. S)

Providing accessible content and information resources is important to promote mental health knowledge in the community, especially among adolescents. About half of the interviewees mentioned access to mental health information resources as an effective factor in improving adolescent mental health literacy. As an example, about the lack of content that is appropriate for adolescents, one interviewee stated, "The content that is suitable for students has not been produced at all! We have weak content and a simpler text should be provided to them (adolescents) so that they can show their abilities." (A. M)

4. Continuous assessment

Providing mental health literacy services based on the needs of adolescents and prioritizing services in a targeted manner will be effective in implementing successful interventions. Several interviewees cited needs assessment and prioritization of mental health literacy services as effective factors in improving adolescent mental health literacy. As one interviewee stated, "If they do a poll. Asking and evaluating and seeing what they want to learn helps a lot and the content that is provided will be based on needs and properly sized." (A. M)

Perfect and optimal provision of services and programs requires continuous evaluation and control of services to identify and eliminate possible deficiencies. Continuous evaluation and control of mental health literacy services was identified as an effective factor for improving mental health literacy in adolescents. An interviewee stated, "Most importantly, we do not have evaluation and control, while interventions must be constantly monitored. Training evaluation and trainings provider are very important." (B. M)

Research about providing mental health information will be effective in planning and implementing interventions based on scientific evidence and data. Several interviewees cited research on how to provide optimal mental health literacy services as an effective factor for improving adolescent mental health literacy. An interviewee stated,

"I think we have to do a pilot first and see what sources of information people are using and who do people think has the right information ... It is a very continuous process that we constantly have to correct and complete the research work." (V. S)

5. Provision of information

At stakeholder organizations, lack of information about programs and policies adopted to improve adolescent mental health literacy can lead to parallel work in the performance of these organizations. Participants in the interview mentioned provision of information in this regard as an effective factor in improving adolescent

mental health literacy. As an interviewee stated, "I'm seeing that organizations are not in touch and are not aware of each other's plans at all. There should be at least one comprehensive system that informs about all the interventions that are taking place in each organization." (GH M)

Informing the community about mental health literacy services will make more people, especially adolescents, benefit from these services. An interviewee stated, "The screening plan and preventive training are not well publicized and many people are not aware of it and this causes many to not participate at all." (Kh. M)

Discussion

The present study identified macro-effective factors to improve adolescent mental health literacy from the perspective of policymakers and experts. Paying special attention to factors that are effective in promoting adolescent mental health literacy in planning and macro policies, especially in designing and implementing coherent interventions with the help of all stakeholders, and preventing the waste of financial-human resources will be helpful.

In the interview process, the use of various and attractive educational platforms was identified as one of the important systemic factors in teaching adolescent mental health literacy. Most of the policymakers/experts participating in the present study mentioned the mass media and advanced information communication technologies such as the Internet, cyberspace and mobile-based applications as suitable platforms for educating and promoting adolescent mental health literacy. Past studies showed that health education through traditional mass media such as radio and television increased healthy behaviors among individuals (28, 29). In addition, young people prefer interactive and accessible media in a variety of formats that allow easy access, great variety, and rapid dissemination of information (30). In several recent studies, educational interventions based on new technologies have been used to promote mental health literacy (31-33). The present study identified the use of interactive methods and offering the possibility of questions and answers as an effective educational method. In the systematic review study by Shahraki *et al.*, The use of attractive educational methods was identified as a facilitator in interventions to promote adolescent mental health literacy (34). Also in one study, interactive education was introduced as a method that has a significant impact on increasing the learning power of adolescents, in addition to improving the knowledge and skills of teachers and students (35). In some studies, attractive educational methods such as dance and yoga (36), role play (37, 38), storytelling (39), and games (38, 40, 41) were used to improve mental health literacy. The use of specialized and trained educators was identified as another factor effective in promoting adolescent mental health literacy in the present study. The literature review

showed that in most interventions for the promotion of adolescent mental health literacy, mental health educators have been used (41-43). Most participants in the interview emphasized the necessity of providing mental health education to adolescents through curriculum-based educational interventions. In several previous studies, curriculum-based interventions were used to promote adolescent mental health literacy (13, 44). In one study, the findings showed that providing mental health education through regular programs in schools can be effective in increasing support for students facing mental disorders and can also improve teachers' mental health knowledge (45). According to the results of the current study, designing a safe and attractive educational space can be an important factor to improve adolescent mental health literacy. In a small number of studies, attention was paid to creating a supportive and safe environment for improving adolescents' interactions during the health literacy interventions. In an intervention, general practitioners increased adolescents' intentions to participate in consultations regarding their mental health by creating a safe and friendly environment (18). Several studies have also mentioned schools as a safe and cost-effective environment that plays an important role in providing various educational interventions for students (46, 47).

In the present study, the integration and coordination of stakeholders to take the necessary measures to improve mental health literacy was identified as an effective component in improving adolescent mental health literacy in Iran. Despite the high evidence of a high prevalence of mental illnesses, some people still lack adequate mental health literacy. In several low- and middle-income countries, authorities give little priority to mental health services (48, 49). A review of the literature also shows that despite the importance of inter-professional cooperation in providing mental health services, this field faces challenges such as ambiguity in the concept of inter-professional cooperation (50), organizational factors (51, 52), different views and attitudes of health professionals in the field of cooperation (53, 54) and poor health service management (55). Complexities and problems in the health system, especially in mental health services, have led health system policymakers and managers in several countries to use organizational and inter-organizational participation in the provision of these services (50, 56). More than half of the interviewees in the present study emphasized the necessity of the existence of a single responsible organization for improving mental health literacy in Iran. Therefore, it seems necessary for all stakeholders to follow a single responsible organization to prevent parallel operation and rework as well as waste of time and energy. In the present study, policymakers and experts emphasized the importance of planning and implementation for sustainable and long-term educational interventions and avoiding the implementation of short-term programs. literature review

shows that long-term mental health literacy interventions with more training sessions can have a great impact on promoting the mental health literacy of participants in the intervention (31, 57, 58). In a systematic review by Shahraki-Mohammadi *et al.*, the results showed that most interventions for promoting adolescent mental health literacy were long-term educational interventions (34).

In the present study, the existence of sufficient resources and facilities was identified as an effective factor for providing adolescent mental health literacy services. Most policymakers and experts participating in this study mentioned the provision of budget, manpower, and facilities as well as the proper distribution of facilities throughout the country as effective factors in promoting adolescent mental health literacy. In the present study, most interviewees mentioned the small share of the mental health budget compared to that of the general health, and the allocation of most of this budget to the treatment sector as some problems in this field. Given that only about three percent of the country's health budget is allocated to mental health, the need to manage and direct the budget in the prevention and promotion of mental health literacy is of particular importance (59). Limited mental health resources can be the result of poor economic conditions, the low priority given to mental health compared to public health, and inadequate oversight of resource allocation (60). Inadequate financial resources (61), lack of specialized manpower (62) and geographical imbalance in the allocation of financial resources (61, 62) were identified as problems in providing mental health services. In the study by Taqwa *et al.*, insufficient financial resources was identified as one of the problems in improving the stigma related to mental health issues in Iran (63). In addition, the appropriate distribution of resources and facilities, especially the necessary educational facilities, throughout the country, especially in less privileged areas away from the capital, should be seriously considered by the authorities.

In the present study, policymakers and professionals participating in interviews expressed the necessity of continued evaluation of services and mental health literacy interventions for the identification of potential deficiencies and the effectiveness of these interventions.

In recent decades, quality improvement has been considered as a way to improve the effectiveness of health care systems, especially in low- and middle-income countries (64). The first step is to improve the quality, performance evaluation and services provided (65). International organizations such as the World Health Organization and the Organization for Economic Co-operation and Development (OECD) encourage countries to measure and evaluate the performance and quality of their services (66, 67). The literature review also showed that several studies have focused on evaluating mental health literacy and educator interventions (57, 68, 69). There are few surveys and

evaluations around the world to identify patients' expectations of the mental health services they receive. (60). Therefore, in addition to evaluating the performance of mental health literacy services, it is necessary to design and implement interventions based on the priorities of the target community. One of the best ways to set health priorities is through a need assessment. Interventions tailored to the needs of the community will have a greater impact, and the first step offered by the World Health Organization to develop mental health policies is to assess the needs of the community (70). Community needs assessment for health services clarifies the extent and type of people's demands in this regard. Attention to organizational missions and capabilities is also important in this regard (71).

The participants in the present study pointed to the lack of proper information at the level of stakeholder organizations about the services and programs promoting mental health literacy. Informing about programs and policies adopted at the organizational level will prevent rework and waste of time and energy. Two-way communication between the mental health system and the community is critical to providing effective mental health services (72). In the present study, interviewees mentioned increasing public awareness about mental health literacy services as a factor that is effective in benefiting from these services. Also, the results of the literature review showed that one of the reasons why the youth and adolescents do not use mental health literacy services can be lack of awareness about the available mental health services (73, 74). In Shahraki-Mohammadi *et al.'s* study, participating adolescents mentioned lack of knowledge and awareness about mental health information resources and also the role of mental health professionals in this field as factors that inhibit the improvement of adolescent mental health literacy (24).

Limitation

Due to the impossibility of necessary official coordination by the Iran University of Medical Sciences with the ministries, it was not possible to interview the policymakers and senior experts of the ministries such as the Ministry of Education. As a result, obtaining the consent of the interviewees in the mentioned ministries was done outside the official and administrative procedures. In some cases, due to the interviewee's busyness and lack of time, this issue led to conducting the interview in several stages or more than one day.

Conclusion

Findings of this study showed that at the macro level, factors such as mental health literacy training, integration and coordination of stakeholders, provision of the necessary resources and facilities, continuous evaluation of interventions and provision of information about services provided can affect the improvement of

adolescent mental health literacy in Iran. Although results of the present study showed that these factors can affect the improvement of adolescent mental health literacy in Iran, special attention of policymakers is needed for planning and policy-making at the macro level and for identifying direct and indirect strategies for the correct implementation of policies adopted in this field.

Acknowledgment

Conflict of Interest

The authors declare that there is no conflict of interest. They have seen and agree with the contents of the manuscript and there is no financial interest to report.

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