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Adaptation of mental health first aid guidelines for eating disorders for Iran

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Abstract

Background This study aimed to adapt mental health first aid guidelines to support individuals with or at risk of developing eating disorders in Iran. This adaptation seeks to enhance the support available for the Iranian population dealing with these disorders.

Methods We employed the Delphi expert consensus method, utilizing two panels: health professionals ($n=37$ in the first round; $n=29$ in the second) and individuals with lived experience ($n=20$ in the first round; $n=18$ in the second). The health professionals panel was selected from the graduates of various eating disorders associated scientific fields who had a history of providing services to or conducting research on people with eating disorders, and the lived experience panel had a history of eating disorders themselves or in their family. The panel of individuals with lived experience included those who had personal or familial histories of eating disorders. Efforts were made to ensure cultural, gender, and age diversity in the selection of panel members. Panellists rated the importance of each item for inclusion in the guidelines for Iran based on the English-language Mental Health First Aid guidelines for eating disorders. Items deemed essential by at least 80% of both panels were included in the final guideline. Additionally, panel members were invited to suggest any missing items.

Results A total of 57 participants took part in the first round of the survey, and 47 participated in the second round. In the first round, 204 items across 11 categories were assessed, with 174 items endorsed by the panels. Thirteen items were re-scored in the second round, and 17 items were rejected. Participants suggested 11 new items in the first round. In the second round, 18 out of 24 items were endorsed, while six were rejected. Ultimately, 192 items were incorporated into the Iranian guidelines.

Conclusions The adaptation process considered Iran's social and cultural characteristics, including the stigma associated with mental health disorders, religious beliefs and rituals such as fasting, linguistic differences between English and Farsi, distrust of strangers, the influence of friends and family, differences in food access, and low mental health literacy. We recommend piloting the adapted guidelines in high schools, universities, and non-governmental organizations to evaluate their feasibility and effectiveness in real-world settings. Furthermore, it is essential to establish mechanisms for feedback, update content based on the latest evidence, and collaborate with the media to promote educational programs and public participation.

Keywords Mental health, First aid, Eating disorders, Guidelines

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Background

Eating disorders (EDs) rank among the most prevalent and significant mental health issues, affecting approximately 4% of the global population. These disorders are characterized by concerns and negative perceptions about body image, altered eating behaviors, and symptoms such as weight loss. Common examples of EDs include anorexia nervosa (AN), bulimia nervosa (BN), and binge eating disorder (BED) [1]. AN involves the avoidance of adequate nutrient intake due to a fear of gaining weight. At the same time, binge eating is characterized by consuming large quantities of food in a short period. The American Psychiatric Association (APA) defines EDs as serious and persistent disturbances in eating behavior accompanied by negative thoughts and feelings [2]. The behaviors and symptoms associated with EDs can severely impact individuals' health, causing significant distress and impairing their physical, mental, and social functions. These disorders can lead to severe physical complications, such as medical issues and premature death, as well as psychological problems, including substance abuse and suicide [3].

Two systematic and meta-analyses estimate that the prevalence of EDs in Iranian society is approximately 22%, irrespective of the type of disorder or the age of the individuals affected [4, 5]. Several studies have explored the impact of cultural, social, and economic factors on EDs in Iran. Factors such as religious beliefs, clothing norms (e.g., wearing the hijab and loose-fitting clothing), low self-esteem, self-comparison, reluctance to engage in physical activities, and social pressures from media, advertisements, family, and peers have been identified as contributing factors [6–9]. Additionally, social and cultural influences within society can significantly affect citizens' eating habits [10].

Furthermore, contemporary media advertisements intensify body image dissatisfaction and encourage unhealthy eating behaviors, weight loss, and pathological overeating, particularly among younger generations [11]. Evidence indicates that EDs impose substantial economic burdens on both individuals and society [12], as recurrence is possible even after recovery [13]. Moreover, less than a quarter of those affected seek help and have access to specific, evidence-based treatments [14].

In recent years, the prevention and treatment of various diseases and mental health disorders in Iran's healthcare system have significantly transformed through the training of specialized and qualified personnel [15]. Mental health is an integral component of Primary Health Care (PHC) and programs aimed at detecting hidden patients [16]. However, the mental health budget in Iran

constitutes only a negligible portion of the country's total health expenditure, approximately 3% [17]. Many individuals still lack sufficient access to available care due to a lack of awareness about specialized services in both the public and private sectors [15]. The challenges of implementing mental health programs in Iran include a lack of resources and funding, the stigmatization of mental health disorders, insufficient training of healthcare personnel, deficiencies in the payment and remuneration system, weak coordination among various levels of the healthcare network, and inadequate infrastructure and specialized facilities [16, 18–20]. Iran's healthcare system has prioritized the integration of preventive, screening, therapeutic, research, and educational services to support patients and their families affected by EDs [21, 22]. However, specialized services related to ED, including screening, diagnosis, and treatment, are not as accessible as they should be in Iran [23]. Treatment-centered approaches, economic sanctions, and the COVID-19 pandemic have diverted health policy focus away from EDs issues [24]. Moreover, studies on EDs in Iran have primarily concentrated on determining prevalence rates, designing screening tools, and clinically assessing affected individuals [5, 25–27].

Improving community mental health literacy (MHL) regarding the diagnosis of EDs, providing support and encouragement for sufferers, and ensuring access to specialized treatment are some of the recommended strategies [13, 14]. Generally, individuals with high levels of MHL actively seek social support and professional assistance, while those with lower MHL are less likely to attempt to improve their conditions [28]. Higher MHL enables individuals to correctly identify health problems in themselves and others, promoting care-seeking behavior. This facilitates early intervention and prevents the exacerbation of diseases [29]. Assisting individuals with mental health conditions, worsening previous mental health issues, or in severe mental health crises are examples of mental health first aid (MHFA). This assistance should continue until the crisis is resolved or professional help is obtained [30, 31]. People with EDs often seek help from informal sources such as friends, family, and the Internet, highlighting the importance of training the general population to provide initial support [14, 32]. To address this need, some developed countries have created MHFA for EDs. These guidelines offer recommendations and principles to train and empower first aiders among the general population [13].

Making these guidelines accessible to a broader audience may require revisions and adaptations to meet the specific needs and cultural and social conditions of different countries [33, 34]. Improving MHL and

implementing MHFA training programs—based on these guidelines—are effective measures for the timely identification of patients with EDs [35]. In Australia, MHFA training programs have been designed and implemented to train and empower first-aiders. These evidence-based, internationally accredited educational programs equip participants with the skills, knowledge, and confidence to support friends, family, and colleagues experiencing mental health issues or crises. The programs are guided by comprehensive and specific guidelines agreed upon by experienced professionals, addressing a wide range of mental health issues, including EDs [36]. The specialized MHFA guidelines for EDs offer several benefits, including a better understanding of patients and their needs and preventing the dissemination of misinformation [13, 37]. Previously, MHFA guidelines in Australia have been examined in separate studies focusing on key areas such as alcohol consumption in China [38], Chile, and Argentina [39], as well as depression in Sri Lanka [40] and Brazil [41], utilizing the Delphi method. However, research on this topic remains limited. A review study has identified the specialized Australian guideline on EDs as one of the few influential guidelines globally. Additionally, the Delphi method has been recognized as a conventional approach for developing and localizing the MHFA guidelines in Asian countries [42]. In Doley et al. (2017), a community-based education guideline for EDs was developed by gathering consensus opinions from health professionals and sufferers. Three Delphi rounds were conducted to extract recommendations from specific and international MHFA guidelines for EDs, including those from England, the United States, and Australia. These recommendations were then scored and modified by an expert panel. The results indicated that the guidelines should include information on identifying the causes of EDs and promoting help-seeking behaviors [43].

Jorm and Ross (2018) introduced topics related to EDs within the context of MHFA guidelines for the general public. These topics included the nature of the illness, communication with the patient, seeking professional help, continuity of support, and addressing the needs of specific age groups. Additionally, they emphasized the importance of maintaining patient privacy, acting swiftly for professional groups, seeking immediate help, involving family members in caregiving, and ensuring patient confidentiality [42].

MHFA interventions are most effective when adapted to the specific concepts, values, language, and cultural and environmental backgrounds of the target country [33]. Consequently, this study aimed to develop MHFA

guidelines for EDs in Iran, considering the country's unique cultural characteristics and mental health service delivery system.

Methods

This applied study was conducted in 2022 using a Delphi approach encompassing three stages: selecting the most relevant MHFA guidelines for EDs, translating recommendations from these selected guidelines, and adapting them to the Iranian context through a Delphi survey method. The Delphi method is a systematic process designed to achieve consensus among panel members. In this approach, panel members anonymously complete a questionnaire over multiple rounds, receiving controlled feedback after each round. This process continues until a consensus is reached [44, 45].

Selecting a reference guideline

In the first step, a Google search was conducted using the keywords "Mental health first aid," "Guideline," and "eating disorder" to identify relevant MHFA guidelines. The identified guidelines were then evaluated against specific criteria, including complete accessibility of content, availability in English, focus on community education, relevance to the topic, and publication date within the last ten years. These criteria were selected to ensure the guideline's up-to-date relevance and feasibility of utilization. The "Eating Disorders: Mental Health First Aid Guidelines" met all the criteria and was chosen as the primary reference for adaptation in coordination with the guideline development team. This guideline aims to provide recommendations on delivering MHFA to individuals with or at risk of EDs in 11 key areas for the general population [46]. The research team thoroughly assessed the content of this guideline to ensure its comprehensiveness and relevance. Based on the available evidence, the team confirmed the credibility of its compilers to guarantee accuracy and quality. Additionally, as the MHFA guideline series has already been localized in various countries, it was used as an initial source for adapting recommendations.

Translation of recommendations

Access to the tool utilized in this study was obtained through formal correspondence with the members of the MHFA Australia development group. A list of the endorsed statements was previously published in the 2009 article by Hart et al. titled "First Aid for Eating Disorders" [47]. The translation of the questionnaire followed similar methodologies used in previous studies on the development and cultural localization of MHFA guidelines [38–41, 48, 49]. The study team

received the original questionnaire from its authors. Four individuals, including two translators and two subject health professionals, translated the English domains and items into Farsi. Two translators, one specializing in psychology and the other proficient in translation techniques, initially translated the questionnaire from English to Farsi. Subsequently, two other research team members, one adept in translation techniques and the other knowledgeable in psychology, retranslated the Farsi version back into English. Any disagreements were resolved through group discussions until a consensus was reached. The translation process took several considerations into account. Efforts were made to avoid word-for-word translation while maintaining the structure and order of the questions. The original questionnaire was culturally adapted by replacing unconventional concepts and terminologies with more familiar ones to convey meanings and concepts similar to the original. Additionally, the questionnaire was aligned with religious considerations, social norms, and the healthcare provision structure in the country.

Panel recruitment

Two panels were established for this study: one comprised health professionals, and the other included individuals with lived experience from the general population. The expert panel consisted of psychiatrists, psychologists, doctors, and nutritionists, all of whom had at least two years of experience in health service delivery or related research. The panel of individuals with lived experience included those who had a history of EDs and family members who participated through support groups for EDs sufferers and their families. The inclusion criteria for the panel of individuals with lived experience were being over 18 years old and having at least a middle school education. The rationale for selecting these two specialized panels was multifaceted. Individuals with lived experience provided valuable insights into the content's comprehensibility and applicability, communication methods with patients, and other cultural and social nuances that specialists might overlook. Conversely, health specialists contributed their scientific and expert knowledge, enhancing the validity, depth, and accuracy of the guideline recommendations. The inclusion of both panels ensured a diverse and balanced range of viewpoints.

The sampling method was non-random and employed a snowball technique. A minimum of 30 participants was required to meet the Delphi methodology standards [50]. To account for potential dropouts and a response rate of less than one-third, the online questionnaire link was sent to over 90 individuals.

Data collection and analysis

This step was conducted over two Delphi survey rounds. First, the study team prepared an online questionnaire containing all the recommendations. The questionnaire was designed using Porsline, a survey platform in Iran, and its link was sent to specialists via emails or SMS, as well as to individuals with lived experience through SMS and virtual media platforms such as Telegram and WhatsApp. To enhance the response rate, a reminder was sent three times. Stakeholders were asked to rate the importance of each recommendation using a five-point Likert scale (ranging from "important," "important but needs revision," "I have no opinion," "not important," and "should not be included"). Each recommendation included a row for stakeholders to provide feedback on necessary corrections for items needing revision. Additionally, at the end of each domain, a box was provided for participants to offer new recommendations based on their experiences or the country's conditions. Recommendations were scored in the second Delphi round using the same method as in the first round.

The level of agreement on the recommendations was determined using the following criteria [47]:

- **Agreed Recommendations:** Recommendations where the level of importance ("important" or "important but needs revision" responses) was 80% or higher by both panels in both rounds.
- **Recommendations Requiring Re-scoring:** Recommendations with an importance level between 70 and 79% by both panels in the first round or recommendations with an importance level of 80% or higher by only one panel were included in the second Delphi round for further consideration.
- **Rejected Recommendations:** Recommendations with an importance level of less than 70% by both panels were excluded.

Ethics approval

The Tehran University of Medical Sciences Ethics Committee approved the study under the code of ethics IR.TUMS.NIHR.REC.1399.012.

Results

In the first round of the study, the questionnaire link was sent to 99 individuals across both panels, consisting of 60 health professionals and 39 individuals with lived experience. As shown in Table 1, 37 (62%) health professionals and 20 (51.2%) individuals with lived experience

Table 1 Participation of Delphi panelists in each round by panel

	Panel of professionals	Panel of people with lived experience	All
Round 1	37	20	57
Round 2 (Retention Rate Over 2 Rounds)	29 (78.4%)	18 (90%)	47 (82.4%)

participated in the first round, resulting in an overall participation rate of 57.6%.

In the second round, the questionnaire link was provided to the participants from the first round. Of these, 29 (78%) health professionals and 18 (90%) individuals with lived experience completed the questionnaire, resulting in a participation rate of 82% for the second round.

Further details regarding the participants' demographic characteristics are provided in Table 2.

Agreed recommendations

As shown in Fig. 1 and Table 3, a total of 215 items were surveyed during the first and second rounds, excluding the 13 items that required re-scoring in the second round. In the first round, the importance of 174 items was agreed upon, representing 85.3% of all items surveyed in that round. Following the second round, 18 additional items were agreed upon, accounting for 75% of all items reviewed in the second round.

Ultimately, 192 items were agreed upon by the panelists. Of these, 185 were taken from the Australian guidelines, constituting 90.7% of all items extracted from the reference guideline, and seven were new recommendations, representing less than 4% of the items in the final guideline. The approved items primarily pertained to the topics "What is an EDs?" and "What are its warning

signs?" The most significant changes and omissions were made in the area of "How to approach someone with EDs?" as indicated in the supplementary information file.

Recommendations requiring re-scoring

As depicted in Fig. 1, 13 recommendations met the defined conditions for re-scoring. Consequently, a second Delphi round was conducted after making changes to ensure more appropriate wording in Farsi, correct punctuation, and consideration of Iran's social and cultural context. The majority of recommendations requiring re-scoring were related to the following: "What is an EDs, and what are its warning signs?".

Of the recommendations subject to re-scoring, 11 were ultimately approved in the second round (for more details, see the supplementary information file). A key factor in some recommendations requiring re-scoring was the significant difference in agreement percentages between the two panels of health professionals and individuals with lived experience, with a discrepancy of more than 10% (for more details, see the supplementary information file).

New recommendations

Based on feedback from participants in the first Delphi round, 22 new suggestions were submitted. The research team reviewed these suggestions for practicality and non-repetition, selecting 11 items to present as new recommendations in the second Delphi round. In the second round, participants approved seven of these items (refer to Table 4).

Rejected recommendations

As shown in Fig. 1, a total of 23 items were discarded over two rounds: 17 in the first round and 6 in the

Table 2 The socio-demographic characteristics of all participants

Characteristics	Panel of health professionals		Panel of people with lived experience	
	Frequency (n = 37)	Percentage (%)	Frequency (n = 20)	Percentage (%)
Sex				
Female	26	70.3%	18	90%
Male	11	29.7%	2	10%
Age				
Range	26–60 years	NA	28–49 years	NA
Mean	41.4 ± 7.5	NA	34.6 ± 4.9	NA
Area of practice				
Psychologists	19	36.5%	NA	NA
Physicians	10	19.2%	NA	NA
Psychiatrists	6	11.5%	NA	NA
Nutrition and diet specialists	2	3.8%	NA	NA

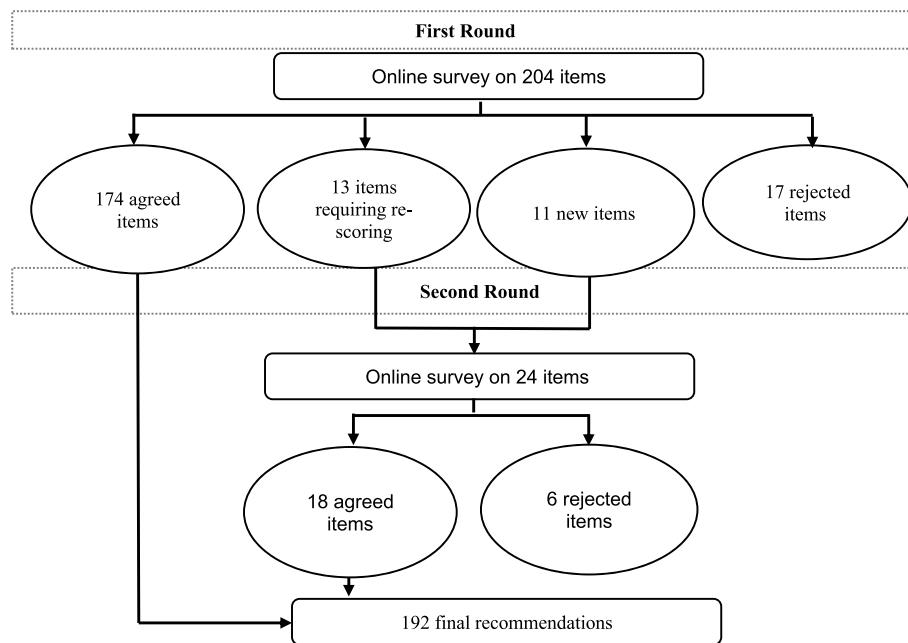


Fig. 1 Results of the first and second rounds of the Delphi survey

second round (for more details, refer to the supplementary information file). Participants were also asked to provide reasons for deeming items less critical. The results indicated that redundancy was the most frequent reason for rejecting an item.

Discussion

This study aimed to culturally adapt MHFA guidelines for EDs in Iran using the Delphi expert consensus method. The participants included health professionals and individuals with lived experience of EDs.

Table 3 Number of items during the first and second rounds of Delphi by the 11 areas of recommendations

Area	Round 1					Round 2		
	Polled	Confirmed	Needed re-scoring	Rejected	New Recommended	Polled	Confirmed	Rejected
<i>"What is an EDs, and what are its warning signs?"</i>	56	45	8	3	0	8	7	1
<i>"How to approach someone with EDs?"</i>	19	13	2	4	6	8	7	1
<i>"How to express concern to the affected person?"</i>	34	30	0	4	0	0	0	0
<i>"How to deal with a person's negative reactions?"</i>	17	15	1	1	0	1	0	1
<i>"How to handle refusals of help?"</i>	12	10	0	2	0	0	0	0
<i>"What should be considered when requesting professional help?"</i>	8	7	0	1	0	0	0	0
<i>"How to support the affected people until they seek professional help?"</i>	14	12	1	1	0	1	1	0
<i>"What should be considered when the first aider is a parent of a child or teenager with EDs?"</i>	17	15	1	1	3	4	0	3
<i>"What should be considered when the first aider is a young person helping a friend with suspected EDs?"</i>	9	9	0	0	2	2	2	0
<i>"What should be done in an emergency?"</i>	4	4	0	0	0	0	0	0
<i>"What are the medical emergencies for EDs?"</i>	14	14	0	0	0	0	0	0
Total	204	174	13	17	11	24	18	6

Table 4 The percentage of panel members' agreement with the recommendations suggested in the first round^a

No.	Suggested items	The Participation Rate (n=47)	Percentage of the agreement by the panel in the second round	
			Health professionals	People with lived experience
Area 2: How to approach someone with ED				
1	"The first aider should be aware that the nutritional customs can differ in every region of the country."	46 (97.9%)	88.9%	88.9%
2	"The first aider should try to earn the person's trust."	47(100%)	86.2%	88.9%
3	"The first aider should not treat the person as when they are helpless."	47(100%)	86.2%	88.9%
4	"The first aider should use simple language."	47(100%)	100%	94.4%
5	"The first aider should direct their feedback to future actions and should try and motivate the person."	47(100%)	96.6%	94.4%
Area 9: What to consider if the first aider is a young person helping a friend with suspected ED				
6	"The first aider should consider the influence of peers when thinking about how to help the person."	47(100%)	96.6%	94.4%
7	"The first aider should try and separate their friendship and first aider roles when helping the person."	47(100%)	86.9%	88.9%

^a This table only includes the approved recommendations based on the methods explained. The rejected recommendations table discusses the ultimately omitted recommendations (4 items)

Agreed recommendations

Over 90% of the items in the English-language guidelines and seven of the 11 newly suggested items by the panel were endorsed. Most of these items (85.3%) were confirmed in the first Delphi round, with only 5% added in the second round. Previous studies have shown that the MHFA guidelines series has strong scientific support, suggesting that accepting and implementing these guidelines' recommendations will encourage Iran to adopt an evidence-based approach to EDs interventions. As Jorm previously noted, a high number of approved recommendations in a country indicates the high generalizability of the reference guideline. When there are social similarities between countries, the likelihood of accepting many guideline recommendations increases in the destination country [51]. Guidelines' recommendations should be adapted to the country's socioeconomic and cultural circumstances. For example, in a study about implementing MHFA guidelines in the deprived region of Uganda, Hays found challenges in health service infrastructure and a lack of cultural compatibility [52].

A comparison of the number of approved recommendations across the eleven areas showed that understanding EDs and recognizing their warning signs were the most critical. In line with the present study, Hart's study found that the area of understanding and awareness had the highest number of accepted recommendations (60 cases) [47]. According to Mond, a key factor explaining low health literacy about EDs is that some of these disorders, like binge eating, have only recently been

recognized as psychiatric disorders. There is also low community awareness of EDs due to widespread beliefs that they are not prevalent or severe, stigma towards those affected, and demographics such as gender concerning MHL related to EDs [53].

However, researchers have paid less attention to Iranians' health literacy regarding EDs. Studies on the country's population have mainly focused on food and nutritional literacy (knowledge, skills, and behaviors related to a healthy diet and adherence to it) [54, 55]. In line with one of these few studies, only about 11% of Iranian youths had good health literacy about EDs, and about 34% were not confident in their ability. This cross-sectional study was performed on people aged 16–29 living in Tehran to measure health literacy about EDs. This study emphasized the importance of friends and family in supporting people with EDs, providing MHFA in simple language, educating those affected on how to manage their condition, and informing them about the professional services and help available [56].

Rejected recommendations

In this study, the most frequently deleted recommendations, with a total of four items, pertained to the areas "How to approach someone with EDs?" and "How to express concern to the affected person?" The central idea behind these areas is effective communication with individuals in need. According to research

findings on MHFA guidelines for assisting people with alcohol abuse in Chile and Argentina, the guidelines should align with the cultural orientation of the destination country to respect the wishes and expectations of the person needing help regarding interpersonal relationships [39]. Consequently, Fernando et al. identified linguistic respect for autonomy and the right to refuse professional help as reasons for omitting several recommendations from their panel in a study on MHFA aid for depression in Sri Lanka [40].

Additionally, countries may have different service delivery models, risk factors, and vulnerable populations [57]. Studies have shown that the prevalence of EDs in Iran, similar to other developing countries, is influenced by a combination of cultural, socioeconomic, racial, and genetic factors [5]. Another study highlighted that cultural issues, such as religion and the practice of wearing a hijab, are significant socio-cultural factors to consider when analyzing EDs in Iranian populations [6]. The eating behaviors of the Iranian population in the southern regions are shaped by factors such as access to food, food preferences, cultural values, family beliefs, and practices related to cooking and storing food [58].

Moreover, evidence suggests that Iranian women and children are particularly vulnerable groups that require special attention [6, 7]. Therefore, addressing these groups' unique emotional and communication needs is essential when preparing MHFA guidelines. In the present study, various Iranian cultural characteristics, including stigma towards mental health disorders, religious beliefs and rituals such as fasting, linguistic differences between English and Farsi, the influential role of family and friends, trust in others, and ethnic diversity were considered in rejecting and rewriting recommendations.

New recommendations

As mentioned earlier, in the Iranian adaptation, seven out of the 11 new recommendations were confirmed and incorporated into the final guideline. These new recommendations fall under two main areas: "How to deal with the affected person" and "The role of a young first aider in helping a friend suspected of having an EDs."

Regarding the first new recommendation, "The first aider should be aware that the nutritional customs can differ in every region of the country," it is important to note that Iran's vast geographical and ethnic diversity results in distinct regional food cultures. Participants emphasized that first aiders should consider these cultural customs when addressing dietary restrictions related to food type and quantity rather than solely

focusing on EDs. A 2023 review highlighted the importance of considering variables such as ethnicity when estimating and determining the prevalence and risk factors of EDs, consistent with the current study [59]. Another study emphasized the role of values and beliefs, identifying factors such as maternal education, attitudes and practices regarding children's nutritional habits, socioeconomic status, country of residence, culture, ethnicity, religion, and superstitions as determinants [60]. Furthermore, the versatility of diets among Iranians and their association with the emergence of disorders has been confirmed [61]. Another study identified several influential factors in Iranian dietary preferences, including family traditions, experiences, values and beliefs, societal and cultural factors, interest in traditional medicine, life priorities, access to resources, cooking skills, and religious beliefs [62].

The second and third recommendations, "The first aider must try to earn the person's trust" and "The first aider should not treat the person as if they are helpless," address the significant stigma associated with psychiatric disorders, including EDs, within Iranian culture. This stigma can lead to social isolation or ridicule for individuals with EDs. Participants endorsed these recommendations to raise awareness among first aiders and prevent behaviors that contribute to these negative outcomes. Supporting this finding, a cross-sectional study reported that stigma is one of the main obstacles to seeking professional help among Iranian women struggling with obesity, highlighting the importance of considering stigma in the design and implementation of interventions [63].

The fourth recommendation, "The first aider should use simple language," highlights the participants' emphasis on the importance of avoiding scientific expressions and terminology when interacting with and assisting individuals suspected of having an ED. This recommendation addresses the issue that trained individuals may often use jargon, which can harm the first-aiders-patient relationship. The importance of practical training on how to appropriately communicate with individuals with mental health disorders has been emphasized in several studies [64]. For instance, effective communication with affected individuals was a critical factor considered in Li et al.'s study for developing MHFA guidelines for alcohol problems [38].

The fifth recommendation, "The first aider should direct their feedback to future actions and try to motivate the person," reflects the participants' experiences in motivating individuals. This recommendation was added to the guidelines to emphasize the importance of motivation in aiding individuals with EDs. Several

studies have highlighted the role of motivation in the recovery of patients with EDs, noting that long-term motivation can promote treatment adherence and reduce susceptibility to false social values and norms [65, 66].

The sixth recommendation, "The first aider should consider the influence of peers when thinking about how to help the person," was added to the guideline in recognition of the strong influence peer groups have on each other. This recommendation encourages first aiders to leverage peer groups to support adolescents showing symptoms of EDs. In research conducted to adapt MHFA for suicide in China, Lu et al. emphasized the importance of considering factors such as the community's attitude towards suicide and the role of families and friends [48, 49].

Several studies have emphasized the necessity of considering the role of peers when designing administrative and preventative eating disorder interventions [67, 68]. Peers can significantly support adolescents with EDs. By training select individuals, health ambassadors can be empowered to use peer influence to educate others about unhealthy eating habits. When considering the role and effectiveness of these trained individuals, it is essential to account for gender differences [69].

The seventh and final recommendation, "The first aider should try to separate their friendship and first aider roles when helping the person," emphasizes the importance of adopting a specific approach to overcome barriers when supporting a friend with symptoms of an EDs. This approach allows first-aiders to balance their roles as friends and caregivers. By establishing a distinct time and communication framework, first aiders can offer essential support during critical moments while preserving the core of their friendship. Once the immediate crisis is resolved, the friendship can resume. This recommendation stresses the need for clear boundaries and a structured method for providing support, ensuring the effectiveness of aid while maintaining the dynamics of the friendship. By separating these roles, first aiders can minimize conflicts of interest, uphold the individual's autonomy, and address ethical considerations such as confidentiality.

Recommendations with more than 10% difference between the two panels

Another notable finding of the study was the significant number of recommendations with more than a 10% difference in the percentage of agreement between the two panels of health professionals and individuals with lived experience. Similar to our study, McMaster et al. confirmed the differences in views on EDs among health professionals, consumers, and caregivers [70].

In Hart et al.'s study, 13 recommendations showed a significant difference of opinion between the panels, attributed to differences in attitudes towards preserving patient privacy, recognizing and acting on emergencies, and respecting patient autonomy versus making decisions for the patient [47].

Additionally, another study assessed the differing educational needs of the general population and specialists, including general practitioners, psychiatrists, gynecologists, gastroenterologists, medical students, paramedics, managers, teachers, coaches, and gym workers. This study suggested employing various strategies to enhance these groups' ability to recognize EDs. Recommendations included improving the initial training process and its continuity, emphasizing electronic platforms for specialists, enhancing MHL, and implementing MHFA training programs for the general population [71].

The significant difference in opinions on many items is likely due to the varying levels of awareness and knowledge between the two groups about the signs and symptoms of EDs, coping strategies, the need for professional help, and the necessity and importance of first aid. This highlights the critical need to provide education and increase awareness at the community level.

The item "hiding their behaviors from their family and loved ones, the first aider should tell a responsible and trusted adult, even if it is against the friend's wishes," highlights the community's strong emphasis on maintaining friendship, loyalty, trust, and confidentiality. Evidence indicates that respecting the rights of patients with EDs and acknowledging their autonomy in decision-making is essential for enhancing their engagement and adherence to treatment [72].

Regarding the items "The first aider should be aware that there is no quick and easy solution to overcoming an eating disorder, but effective treatment is available" and "A person with EDs will benefit from professional help," the discrepancy between the two groups may stem from differing perceptions. People with lived experience might hold misconceptions about EDs, such as believing that willpower or simple lifestyle changes can overcome them. This could explain the lack of agreement, as there may be a lack of understanding of the severity and complexity of these conditions. Conversely, health professionals possess in-depth knowledge and experience working with individuals with EDs. They understand the challenges in treating these conditions and are more likely to recognize the necessity of professional help and the absence of quick fixes.

For the item "If the child becomes harmful to themselves or others, the parent must be prepared to move them to a safe environment, such as a hospital," the agreement rate from the community group was below

70%. This may be due to societal stigma and misconceptions surrounding mental health issues, leading to reluctance to acknowledge the severity of the situation and the need for immediate professional intervention, such as hospitalization. Further research is needed to understand the factors influencing parents' reluctance to hospitalize their children for psychological disorders.

Strengths and limitations

The participation rate in the first round of the Delphi study was 57.6%, possibly due to the large number of items examined (204 items). In the second round, a participation rate of 80% was achieved, with only 24 items discussed. The high participation rate in the second round may be attributed to the participant's familiarity with the study, as the questionnaire link was sent only to those who participated in the first round. Other limitations of this study include the similarity of specialized topic-related guidelines and the lack of valid evidence for comparing and interpreting the results. To address this, a widely-used guideline with proven efficiency in studies was employed as the initial source for content adaptation. The researchers used general search engines and scientific databases to identify evidence, continuing their search throughout the study's implementation and reporting phases. One of the strengths of this study is the multidisciplinary nature of the expert panel members and the inclusion of a dedicated panel for people with lived experience. Additionally, the study's focus on a topic with limited similarity to internal studies on EDs adds to its uniqueness and value.

Practical recommendations

Further studies are needed to evaluate the effectiveness of this guideline, the duration of its effects, and its shortcomings. Additionally, updating the guidelines should be a priority for the country's health system. Future revisions should incorporate feedback from various scientific associations dealing with EDs to enhance the comprehensiveness of the guidelines and address all cases, including those with specific complications. Future studies are recommended to conduct pilot, qualitative, and further Delphi studies to measure the effectiveness of the localized guideline, gather feedback, and revise the content based on up-to-date evidence.

Conclusions

This study developed a MHFA guideline to assist individuals with EDs in Iran using the Delphi consensus method. The adapted guideline encompasses 11 areas and 192 recommendations. The highest number of recommendations focused on understanding the nature of EDs and

recognizing their warning signs, addressing the low level of MHL in Iranian society. Seven new recommendations were proposed and agreed upon by panels of health professionals and individuals with lived experience. Several cultural and social aspects of Iran, such as stigma towards mental health disorders, religious practices like fasting, language differences, the crucial role of family and friends, access to food, and the community's knowledge level about EDs, were considered when reviewing recommendations. The guideline could serve as a vital resource for developing MHFA training programs about EDs within the general population in Iran. Schools, universities, and non-governmental organizations (NGOs) could serve as focal points for implementing and assessing its feasibility and effectiveness in real-world settings. If proven efficient, this guideline can inform Iranian health system policies, programs, and interventions to improve health literacy and train relief workers and health ambassadors through national and international collaboration. Cooperation with the media to introduce educational programs and encourage public participation is also suggested. Clinically, applying this guideline will enhance the involvement of family members and relatives in the detection of patients, communication with physicians, and adherence to treatment.

Abbreviations

AN	Anorexia Nervosa
APA	The American Psychological Association
BED	Binge Eating Disorder
BN	Bulimia Nervosa
EDs	Eating Disorders
MHFA	Mental Health First Aid
MHL	Mental Health Literacy
NGOs	Non-Governmental Organizations
PHC	Primary Health Care

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12888-024-06030-5>.

Supplementary Material 1.

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Authors' contributions

The idea for this paper was conceived by AS and LGH. They developed the working framework in collaboration with HAZ, FG, FN, NR, AS, MN, and SK, who also gathered and analyzed data. AS and LGH wrote the first draft. AS, LGH, HAZ, FG, FN, and NR contributed to subsequent drafts. All authors read and approved the final manuscript.

Authors' information

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Availability of data and materials

All data generated or analyzed during this study are included in this published article [and its supplementary information files].

Data availability

Data is provided within the manuscript or supplementary information files.

Declarations**Ethics approval and consent to participate**

This study was approved by the Ethics Committee of the National Institute of Health Research, affiliated with Tehran University of Medical Sciences (IR.TUMS.NIHR.REC.1399.012). The study aims, data collection and recording procedures, and the roles of researchers and participants were thoroughly explained to all involved individuals. Verbal consent was obtained from each participant before their inclusion in the study. The Research Ethics Committees of the National Institute for Health Research, Tehran University of Medical Sciences, sanctioned the oral informed consent procedure. All data were anonymized before analysis, and participants were assured of their anonymity. All procedures strictly adhered to relevant guidelines and regulations.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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