Original Article

Design and Validation of the Self-efficacy of Care Questionnaire for Adolescents with Mental Disorders

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Abstract

Background: Self-efficacy of care is based on health-promoting behaviors that are formed through dealing with disease conditions and the ability to treatment adherence and management of complications. This study was conducted to design and validate an assessment tool for adolescents with mental disorders. **Materials and Methods:** This study employed a mixed-methods approach to develop a questionnaire aimed at measuring self-efficacy of care among adolescents with mental disorders. Content validity was assessed using both qualitative and quantitative methods, while exploratory and confirmatory factor analyses, convergent validity, and reliability were evaluated through quantitative approaches. Participants, including nurses, psychologists, and adolescent patients, were selected through convenience sampling. The data was analysed using SPSS (version 25.0, Chicago: SPSS Inc.) and LISREL (version 8.72, Jöreskog and Sörbom, 2005) software. **Results:** Initially, an item pool consisting of 87 items was generated based on findings from the original research. Following face and content validation, and subsequent exploratory factor analysis, 28 items across four factors were identified: "health information seeking behavior", "adaptation of life to disease conditions and treatment", "adaptive coping", and "social self-care". The factorial structure of the questionnaire was confirmed through confirmatory factor analysis. Convergent validity, assessed using the General Self-Efficacy Scale, was positive and statistically significant ($P < 0.01$). The reliability of the questionnaire was high, with a Cronbach's alpha coefficient of $\alpha = 0.93$. Test-retest reliability also confirmed the instrument's stability ($r = 0.92$). Finally, all indicators specified in the COSMIN checklist were confirmed. **Conclusions:** The questionnaire demonstrated strong internal consistency and confirmed construct validity. Therefore, this instrument can be reliably used in both clinical and research practices.

Keywords: *Adolescent, mental disorders, self-efficacy of care, validity*

Introduction

Self-care includes performing some aspects of physical care and actively participating in the patient's self-care process, such as tracking treatment progress, monitoring symptoms, checking side effects, tracking positive health-related behaviors such as having a healthy diet, regular exercise, and improving health. Which will ultimately lead to a reduction in treatment costs.[1] New models of care for chronic patients, such as the empowerment program, are based on the patient's role and responsibility in daily self-care.[2] One of the effective factors in performing self-care behaviors is self-efficacy beliefs. The evidence indicates a positive and significant relationship between improving self-efficacy and self-care ability in patients.[3] The results of studies have shown that self-efficacy can be effective in improving people's mental health. Regarding adolescents with mental disorders, self-efficacy is an important variable in reducing the negative effects of mental disorders. Also, it can be effective in the treatment process.[4,5] Hence, assessment of patients' self-efficacy by treatment teams can increase patients' motivation in self-care. Therefore, valid measurement of self-efficacy in a specific disease is necessary.[6]

Many studies have shown that adolescents with mental disorders are weak in several areas of self-efficacy. These areas include social, emotional, academic, and physical self-efficacy.[7] Self-efficacy plays a very important role in dealing with chronic conditions such as psychiatric disorders. And it affects the amount of patients' efforts to cope with the disease and the desire to

How to cite this article: Behzadi S, Yektatalab S, Momen Nasab M, Shaygan M, Zareian A, Rabbani Z. Design and validation of the self-efficacy of care questionnaire for adolescents with mental disorders. Iran J Nurs Midwifery Res 2025;30:653-60.

Submitted: 02-Nov-2023. **Revised:** 27-Apr-2025. **Accepted:** 03-May-2025. **Published:** 11-Sep-2025.

Access this article online

Website: https://journals.lww.com/jnmr

DOI: 10.4103/ijnmr.ijnmr_344_23

Quick Response Code:

persevere and use tolerance strategies. In addition, self-efficacy helps mental patients to cope with the stigma of this disease by increasing self-confidence.[8] Improving self-efficacy in self-care improves self-management and meaningful activities in patients and reduces disease recurrence.[9] By reviewing the research literature, no tools were found to measure self-efficacy of self-care, especially for adolescents with mental disorders. For example, Villagonzalo *et al*. (2018)[10] in Australia prepared a self-efficacy measurement scale for personal recovery of patients with chronic mental disorders. Its target population was adults aged 18-65 years, and it has been validated in only two care centres in Australia. In another study, Tong *et al*. (2005)[11] designed and evaluated the psychometric features of the Self-Efficacy Questionnaire for Depression in Adolescents (SEQ-DA), in Australia among depressed teenagers. The focus of the items was on depression symptoms. It has only been validated in Australia. Another tool was the self-efficacy self-care questionnaire for cancer patients, which was designed by Lu and Wen (1996),[12] as named Strategies Used by People to Promote Health (SUPPH) in the USA. This questionnaire was tested on 114 adult patients with gland cancer who were receiving chemotherapy, which is different from the target population of the present study.

Therefore, the existing tools are not based on the concept of self-efficacy self-care in patients with mental disorders. Also there are differences in the existing questionnaires, in society and purpose. Considering the importance of adolescent mental health, the purpose of this study was designing and validating a self-efficacy of self-care questionnaire for adolescents with mental disorders.

Materials and Methods

This study employed a mixed-methods approach to develop a questionnaire for measuring self-efficacy of care among adolescents with mental disorders. It was a part of a large research project during the years 2022–2023.[13] In the original research, the researchers discovered and explained the concept of self-efficacy in self-care and its dimensions from the perspective of adolescents with one of the mental disorders. In this research, based on the obtained dimensions for self-efficacy in self-care, a questionnaire was designed and validated. Content validity was assessed using both qualitative and quantitative methods, while exploratory and confirmatory factor analyses, convergent validity, and reliability were evaluated through quantitative approaches.

The statistical population includes nurses, specialists and adolescent patients with mental disorders under treatment in the clinics and neuropsychological departments of medical educational centres affiliated to Shiraz University of Medical Sciences (Ave Sina Hospital Clinic, Hafez Hospital, Motahari Clinic, Imam Reza Clinic).

The criteria for entering the research for the patients were the age group of 12–18 years, at least six months of suffering from psychological disorders, at least reading and writing literacy, and the ability to provide information. For nurses, at least three years of work experience in the psychiatric department and caring for adolescents with mental disorders, and willingness to participate in research, and for specialists, at least a master's degree in nursing or psychology. Exclusion criteria included unwillingness to participate in the research.

A sample of experts (nurses and psychologists) and adolescent patients was selected by the convenience sampling method. The sample size was determined as follows: 25 persons (10 patients and 5 experts) were considered for face validity, 30 experts for content validity, and 40 adolescent patients for item analysis. For construct validity, 5 to 10 persons should be considered for each item[14]; hence 400 persons were considered in this study. 50 persons from the sample of 400 patients were considered for investigating the convergent validity, 100 persons for reliability calculation by the internal consistency method, and 30 persons for reliability by the stability method.[15] In total, the sample included 35 experts and 480 adolescent patients. After obtaining the necessary permits, the researchers referred to these centres. Then, participants answered the research questionnaires. Each questionnaire included a consent form to participate in the research, which asked the respondents to express their consent by signing the form before filling out the questionnaire. The psychometric characteristics of the to measure self-care self-efficacy were examined based on COnsensus-based Standards for the selection of health status Measurement INstruments (COSMIN) checklist.[16] This checklist includes 10 indicators including content validity (qualitative and quantitative face validity, qualitative and quantitative content validity), construct validity (exploratory factor analysis method, confirmatory factor analysis and convergent validity), criterion validity, reliability by internal consistency method, reliability by method of stability, measurement error, sensitivity, ease of response, ceiling and floor effect and interpretability.[14,15]

The General Self-Efficacy Scale (GSE) is one of the subscales of the self-efficacy scale that was created by Sherer and Maddux (1982).[17] It has 17 questions. The General Self-Efficacy subscale was used for the aim of this research. Its reliability coefficient was obtained through the Cronbach's alpha method for the GSE of 0.86. The validity of the questionnaire was checked and confirmed by the creators.[17] In Iran, Asghar Nejad *et al*. (2006)[18] reported a Cronbach's alpha coefficient of 0.83 for this scale. This subscale was used for the convergent validity of the measurement studied in the present research.

The research data was analysed using SPSS (version 25.0, Chicago: SPSS Inc.) and LISREL (version 8.72, Jöreskog and Sörbom, 2005) softwares.

Ethical considerations

This study was conducted based on the code of ethics IR.SUMS.REC.1399.741 of the Medical Ethics Committee of Shiraz University of Medical Sciences, dated 23/8/2022. The participants were informed that their participation was voluntary and they could discontinue at any time. They were also informed of confidentiality, and informed consent was obtained from all participants.

Results

Participants' characteristics

The participants were 35 experts (nurses and psychologists) and 450 adolescent patients under treatment in the clinics and neuropsychological departments of Shiraz University of Medical Sciences (Ave Sina Hospital Clinic, Hafez Hospital Motahari Clinic, and Imam Reza Clinic). 298 patients (62%) were female and 182 (38%) were male. The mean (SD) of age was 16.03 (4.25), and the mean (SD) of hospitalization history was 14 (6.4) months. 182 (38%) patients had BIpolar Disorder (BID), 139 (29%) patients had Conduct Disorder (CD), 82 (17%) patients had Attention Deficit Hyperactivity Disorder (ADHD), 34 (7%) patients had Borderline Disorder (BD), 24 (5%) patients had cluster B Personality Disorder (BPD), and 19 (4%) patients had Post-Traumatic Stress Disorder (PTSD).

Steps of items production

According to findings of the original study,[13] the following operational definition was obtained for the concept of self-efficacy of care in adolescents with mental disorders. Self-efficacy of care is a person's belief and judgment of their ability to participate and accept responsibility for reducing symptoms and recovering from the disease. This concept is based on health-promoting behaviors that are formed through adapting life to the conditions of the disease, managing treatment-related complications, adhering to treatment, improving self-care knowledge, using adaptive coping strategies, and social self-care.

The initial draft of the self-efficacy of care questionnaire for adolescents with mental disorders contained 180 items based on a review of the literature and related measurements. In the second and third revisions of the questionnaire, some of the items were merged based on the opinion of experts. So the number of items was reduced to 87. The final questionnaire was prepared with 87 items in 4 dimensions. The dimensions of the questionnaire included health information (9 items), adaptation of life to disease conditions (22 items), coping methods (29 items), and social self-care (27 items), which were prepared for psychometric analysis. The items were scored on a 5-point Likert scale: "always = 5", "often = 4", "sometimes = 3, "rarely = 2", and "never = 1".

Face and content validity

In the face validity, an impact score greater than 1.5 was considered suitable and acceptable.[14] Three items had an impact index of less than 1.5, and after modification, it was able to obtain an appropriate impact score. Two qualitative and quantitative Content Validity Ratio (CVR) and Content Validity Index (CVI) methods were used to determine content validity. According to experts' opinions, the items that overlapped in terms of content were converted into one item. The written format of some items was modified, and some items were merged, and some were deleted. Therefore, 32 items were reduced.

According to CVR indexes, 6 items had a score of less than 0.49 and were removed. Based on the cut point of 0.79 for CVI,[14] this index was higher than the minimum possible for all items, except 12 items that were removed. In addition, the total content validity index was used by calculating the average of Scale Content Validity Index (S-CVI/Ave). Its value was 0.91. Therefore, the CVI of the whole scale was appropriate in the present study. Finally, 37 items remained.

Construct validity

The construct validity was investigated with Exploratory and Confirmatory Factor analysis methods. The sample included 400 adolescents undergoing treatment. Exploratory Factor Analysis (EFA) was performed using the principal components method and Varimax rotation. The results show that a specific factor structure can be extracted from the data (KMO = 0.72, $\chi^2 = 824.68$, $P < 0.001$). Based on the results of factor analysis, 6 factors were determined for the care self-efficacy questionnaire of adolescents with mental disorders, which explained 75.00% of the variance [Table 1].

There were a few items in the last two factors. Hence, the scree plot was used to determine the extracted factors. It showed that most of the variance is allocated to the first 4 factors, the graph becomes almost flat from the 4th factor onwards [Figure 1]. Therefore, 4 factors were determined for the self-efficacy questionnaire for adolescents with mental disorders. These factors explained 65.32% of the variance of the structure. According to the opinions of the research team, 5 items that could not reach the minimum factor loading of 0.4 were removed. Then the remaining items (28 items) were placed in 4 factors [Table 2].

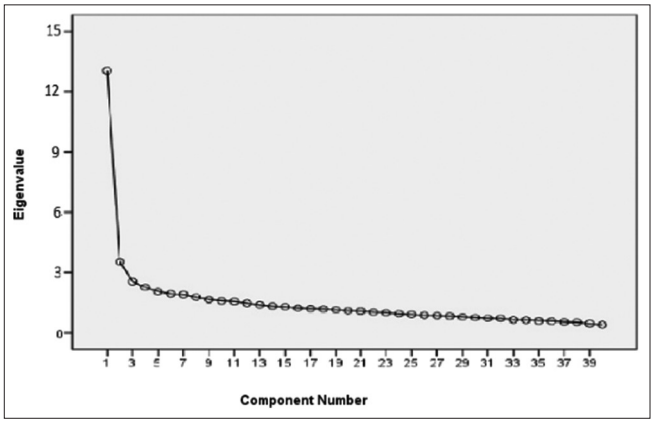

Figure 1: Scree plot

Table 1: Explained variance by each factor, before and after the rotation

Factor	Eigenvalue			The sum of the squares before rotation			The sum of the squaresafter rotation		
	Total	Percentage of variance	The cumulative percentage	Total	Percentage of variance	The cumulative percentage	Total	Percentage of variance	The cumulative percentage
1	12.41	36.80	36.81	12.41	36.81	36.81	5.28	17.03	17.03
2	3.61	11.64	48.45	3.61	11.64	48.45	5.20	16.77	33.80
3	2.81	9.05	57.50	2.81	9.05	57.50	5.06	16.31	50.11
4	2.42	7.79	65.29	2.42	7.79	65.29	4.71	15.21	65.32
5	1.34	5.65	70.94	1.34	5.65	70.94	3.49	6.12	71.43
6	1.02	4.06	75.00	1.02	4.06	75.00	2.47	3.57	75.00

These factors were named as: 1) "health information seeking behavior" (5 items), 2) "Adapting life to disease conditions and treatment". (6 items), 3) "adaptive coping" (9 items) and 4) "social self-care" (8 items). Health information seeking behavior includes the set of behaviors that are performed by the patient to obtain health and treatment information to improve self-care knowledge and skills. Adapting life to the condition of the disease and treatment means that the patient adjusts their life plan according to the condition of the disease and treatment recommendations by adopting a health-oriented lifestyle. Adaptive coping is a range of actions that the patient uses emotion-focused strategies to control negative emotions and unpleasant thoughts. Also, by relying on God and using problem-focused strategies and benefiting from a supportive environment, he effectively deals with problems and reduces his stress. And social self-care includes decisions and actions to prevent social risks and harms, and the ability to meet psychological and social needs.

In order to examine the factor structure of the 28-item questionnaire, the Confirmatory Factor Analysis (CFA) method was used. Based on the results of all the indices obtained (χ^2/df = 0.42, RMSEA = 0.001, CFI = 0.94, GFI = 0.91) confirmed the appropriate fit of the final model. Therefore, the factorial structure of the questionnaire was confirmed. The factor loadings of all items in Figure 2 were higher than the criterion of 0.3.[19] As a result, the factor analysis confirmed the structure of the questionnaire. To investigate the convergent validity, the Self-Efficacy of Care Questionnaire (SECQ) and GSES[17] were completed by 50 adolescents with mental disorders. The correlation coefficient between these questionnaires was significantly positive ($p < 0.001$ and $r = 0.72$). Then convergent validity of the questionnaire was confirmed.

Reliability

The reliability of the questionnaire was checked by two methods of determining internal consistency (Cronbach's alpha coefficient) and stability (test-retest). The Cronbach's alpha coefficient of the whole questionnaire was 0.93 and the Cronbach's alpha coefficients of the factors of health information seeking behavior, adaptation of life to disease conditions and treatment, adaptive coping, social self-care were 0.84, 0.87, 0.73, and 0.89 respectively, which shows the high reliability of the factors and the whole questionnaire [Table 3].

To determine the stability of the questionnaire, the test-retest method was used. 30 adolescent patients completed the questionnaire in two stages across two weeks. The scores obtained from the two tests were calculated using the Intra-cluster Correlation Coefficient (ICC) for each of the subscales and the entire questionnaire. The intra-cluster correlation coefficients of the factors of health information seeking behavior, adaptation of life to disease conditions and treatment, adaptive coping, and social self-care were determined as 0.89, 0.87, 0.87, and 0.88, respectively. Also, the correlation coefficient of the whole questionnaire was 0.92 ($P < 0.001$). Thus, the stability of the questionnaire over time was confirmed.

For checking absolute reliability, the standard error of measurement and the standard error of average were calculated. Also, the sensitivity of the questionnaire was checked. The agreement is positive if the Smallest Measurable Change (SDC) is greater than the Minimal Important Change (MIC). According to the results obtained for all the components of the questionnaire and its total score, SDC indices were greater than MIC, and the sensitivity of the questionnaire was confirmed. The results of examining the effect of the ceiling and floor with the sample size that was considered for the validity of the structure (400 persons) showed that the minimum and maximum score in any of the subscales and the total instrument did not reach 15%. To check the interpretability of the mean and the standard deviation of the scores of the subscales and the total score of the questionnaire in a sample of 50 patients in four groups according to age and gender, it was calculated. The results showed that the mean care self-efficacy scores were different in girls and boys and were higher in girls. Also, with increasing age, care self-efficacy scores have increased, so the interpretability of this questionnaire was confirmed. In this questionnaire, all items were scored positively.

All items of the questionnaire are scored with a 5-point Likert scale: "always = 5", "often = 4", "sometimes = 3", "rarely = 2", and "never = 1". In this questionnaire, the minimum score is 28 and the maximum score is 140. Based on the formula of linear transformation of class

Table 2: Factor loading of each item using varimax rotation

Items	Factor1	Factor2	Factor3	Factor4
1. I can get the necessary information about the disease, treatment, and self-care methods from the treatment staff (doctors, nurses, psychologists).	0.65			
2. I can participate in educational programs that are useful for taking care of myself.	0.54			
3. I can get the information that I need about self-care from various sources such as internet sites or educational books and brochures.	0.71			
4. I can check the correctness of self-care information in various sources (such as the Internet, magazines, books, radio and television, family, friends, and peers)	0.65			
5. I can use the obtained information to control the symptoms of the disease, reduce the side effects of the drugs and prevent the return of the symptoms.	0.63			
6. I can adjust my diet according to the diet prescribed by the doctor.		0.50		
7. I can sleep on time and wake up early according to medical advice.		0.66		
8. I can control the side effects of the drugs by taking actions (such as drinking liquids, Like drinking liquids, consuming fruits and vegetables, avoiding sunlight, doing physical activity, avoiding eating fast foods, etc.).		0.51		
9. I can plan my life based on the treatment and medication plan (such as housework, study, sports, entertainment, and parties)		0.53		
10. I can follow my treatment regularly and according to the recommendations of the doctor and nurses.		0.63		
11. I can cope with the deficiencies and limitations caused by the disease (in recreation, nutrition, education, etc.).		0.59		
12. I can control my emotions. (such as anger, anger, excessive happiness,.).			0.67	
13. I can control negative and unpleasant thoughts with different methods (such as listening to music, going on social networks, playing computer games, talking to friends and family, etc.).			0.50	
14. I can focus on the positive and enjoyable aspects of life.			0.45	
15. I believe that I can try to cure my illness.			0.49	
16. I can share my happiness and worries with others (with doctors, nurses, psychologists, family and friends.).			0.50	
17. I can ask God for help when I am sad and reach peace with prayers and supplications			0.67	
18. I can feel good by doing some things. (such as going to nature, helping others, forgiving others)			0.49	
19. I can find different solutions to solve problems. Then choose the best solution.			0.60	
20. If I have a problem that I am unable to solve it, I can ask an informed person (such as a psychologist, doctor and nurses, parents, etc.).			0.58	
21. Ican have a friendly and reliable relationship with the treatment staff (doctor, nurse and psychologist).				0.42
22. I can help others (such as my family, friends, nurses, and other patients).				0.49
23. I can follow the laws, customs, and values of the society (such as appropriate clothing, permissible behavior about the opposite sex).				0.60
24. I can stay away from people who have dangerous and abnormal behaviors (such as fights and conflicts, drinking alcohol, smoking, drugs, and sexual behaviors).				0.65
25. I can avoid consuming any substances (such as alcohol, cigarettes, hookah, and drugs such as marijuana, etc.).				0.65
26. I sometimes consult with informed persons about relationships with Persons with opposite sex (such as parents, doctors, psychologists, nurses,.).				0.66
27. I can resist the pressure of my peers to have relationships with persons with opposite sex or smoking. (having a girlfriend, boyfriend)				0.57
28. I can avoid illicit and risky sex.				0.710

distance (distance of the classes = (minimum score of the questionnaire - maximum score of the questionnaire)/3), the cut-off points of the questionnaire were determined, 37.[14] Hence, the raw score obtained in the lower third was 28-65 (weak), the middle third was 66-103 (moderate), and the upper third was 104-140 (good). As a result, the care self-efficacy of adolescent patients is determined in three levels.

Discussion

In present study a questionnaire was designed for measuring self-efficacy of care for adolescents with mental disorders. 10 indexes of COSMIN checklist were evaluated and confirmed on the questionnaire. Therefore, this questionnaire had favorable psychometric characteristics and it was evaluated as a valid and desirable measurement.

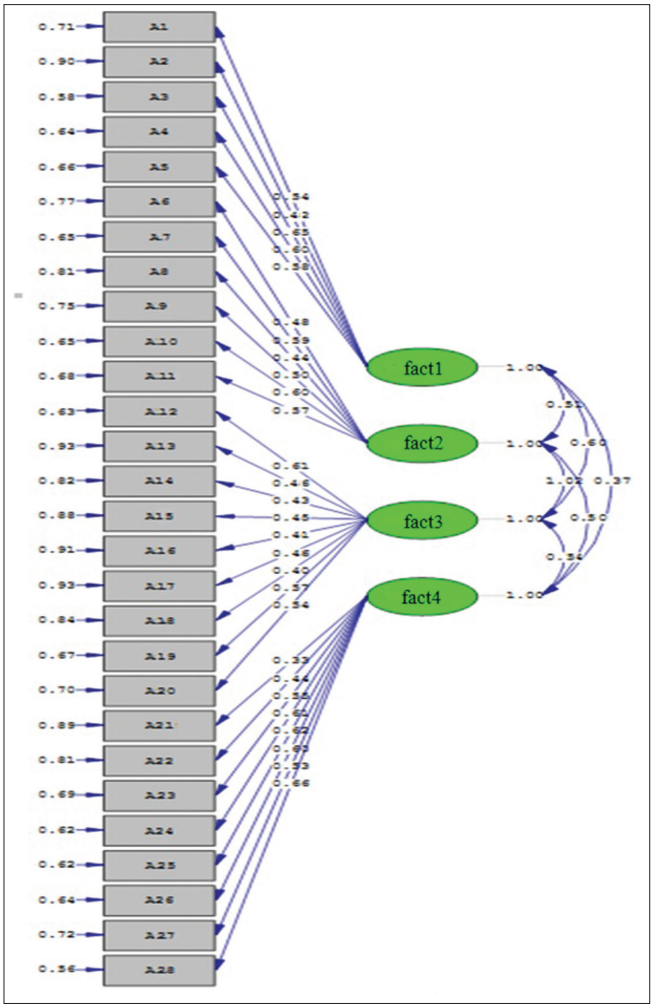

Figure 2: The confirmatory factor analysis model of the self-efficacy of care questionnaire

Table 3: Internal consistency of the questionnaire

Factors	Items (*n*)	α
Health information-seeking behavior	5	0.83
Adapting life to disease conditions and treatment	6	0.86
Adaptive coping	9	0.73
Social self-care	9	0.89
Total	28	0.93

As a result, in this research, a questionnaire for measuring care self-efficacy in adolescents with mental disorders, with 28 items in 4 factors, was prepared. The appropriate number of items, ease of use, and easy scoring method, having simple and general questions, appropriate and desirable validity, and reliability are considered to be the most important features of this questionnaire's applicability. Also, using a qualitative study with a content analysis approach, as a source of generating items, using a large sample of patients, family caregivers, nurses, and psychologists, and checking and confirming all criteria of the COSMIN checklist, is among the strengths of this questionnaire. Researchers did not find any tools for measuring the self-efficacy of care in adolescents with mental disorders. In the following, the psychometric characteristics of the "self-efficacy of care questionnaire for adolescents with mental disorders", are compared with the existing tools for measuring self-efficacy and self-care.

Villagonzalo *et al*. (2018)[10] developed a self-efficacy scale for personal recovery in adult patients with chronic mental disorders in Australia. This tool was designed with a qualitative approach and based on data collection in the real context of the participants. Although the designed questionnaire is a new questionnaire in the field of self-efficacy in the personal recovery of chronic mental patients, it did not have a proper validation process, and its psychometric process was not completely completed (based on COSMIN checklist criteria). Construct validity is reported through divergent and convergent methods, and there was no mention of using exploratory and confirmatory factor analysis. The target population of this study was adults aged 18-65 years, which is not consistent with the target population of the present study, which is adolescents. Another tool is designed by Tong *et al*. (2005),[11] as named Self-Efficacy Questionnaire in Depressed Adolescents (SEQ-DA) One of the weaknesses of this questionnaire is the lack of data collection with a qualitative approach and not having the real context of the participants. In the validation process, divergent validity was not reported. Also, the validation process was done with a small sample size. Its target population was only depressed teenagers, and the focus of the items was on the symptoms of depression and did not include other mental disorders. Considering that the cultural, social, and religious background is important in the design of tools, this questionnaire was not suitable for this study.

Caprara *et al*. (2008)[20] created a scale of self-efficacy in emotion regulation. One of the strengths of their tool is to perform the construct validity of the instrument using exploratory and confirmatory factor analyses. Of course, the validation process of this tool has not been completed according to the COSMIN checklist criteria. Reliability of the instrument is only done with internal consistency, even though stability is an important part in determining the reliability of the tool. Also, convergent validity and discriminant validity have not been examined. This questionnaire was conducted in a society different from the target society of the present study, and it measures only one aspect of self-efficacy in emotion regulation. Chesney *et al*. (2006)[21] also developed a scale for measuring Coping Self-Efficacy Scale (CSES) in America. The construct validity of this questionnaire was checked and confirmed using exploratory and confirmatory factor analysis and convergent validity. The reliability of the instrument was reported only by internal consistency and retest, but the stability of the questionnaire was not checked. Therefore, not all of COSMIN's criteria have been checked. The statistical population of this questionnaire was men with

Acquired Immune Deficiency Syndrome (AIDS), which is different from the target population of the present study, and it only measures the coping aspect of self-efficacy. Another tool as named Strategies Used by People to Promote Health (SUPPH), was designed by Lu and Owen (1996)[12] to measure self-care self-efficacy. One of the strengths of their research was the use of the construct validity method with exploratory factor analysis and convergent validity methods. Of course, the validation process of the tool has not been completed according to the COSMIN checklist criteria. The reliability of the instrument was reported only by the test-retest internal consistency method. This questionnaire was conducted on 114 adult patients with adenocarcinoma who received outpatient chemotherapy, which is different from the target population of the present study. Also, Lorig *et al*. (2008)[5] created a self-efficacy scale for chronic patients.

One of the strengths of this research was the investigation of the instrument validation process with a large sample size and maximum variety (chronic physical patients). Conducting construct validity using exploratory and confirmatory factor analysis with a relatively large sample size was another advantage of this study. The reliability of the tool is also reported by the internal consistency method. There is no mention of the effect of the ceiling and floor in the questionnaire. In this study, the population of chronic physical patients was used, and it did not include mental patients, which is a limitation for the generalization of this tool to patients with mental disorders. The age of the participants was 18 years and above which does not include the target population of this research.

Conclusion

As a result, there was no questionnaire in the existing tools that matched the structure of self-efficacy of care, and these tools lacked complete psychometric criteria. Also, they were validated in statistical societies and different cultures. Therefore, the Self-Efficacy of Care Questionnaire for Adolescents with Mental Disorders (SECQ-AMD), is a valid and reliable tool to evaluate self-efficacy of self-care in adolescents with mental disorders in Iranian society. Since the study conducted is the first study that determines the dimensions of the concept of care self-efficacy from the perspective of patients, professionals, and family caregivers in Iran. Also, the results of this research can be used as a basis for conducting other studies in this field and to strengthen the self-efficacy research literature. Also, this valid and reliable tool can help in therapeutic interventions for adolescent patients in the future. One of the limitations of this study is the statistical population, which only included neuropsychiatric clinics of hospitals affiliated with Shiraz University of Medical Sciences. Also, in the quantitative part, the accessible sampling method was used, which was determined according to the conditions of the patients and the limited access to them.

Acknowledgements

The authors would like to thank the Chairmanship, managers, and nurses of the neuropsychiatric department of the hospitals affiliated to Shiraz University of Medical Sciences and all the participating patients in this study for their cooperation.

Financial support and sponsorship

Shiraz University of Medical Sciences

Conflicts of interest

Nothing to declare.

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