

Translation and Evaluation of Psychometric Properties of the Persian 8-Item Internalized Transphobia (IT) Scale in Iranian Transgenders

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Abstract

Objective: Internalized transphobia (IT) is influenced by societal norms and expectations, and it can have significant negative effects on the well-being and mental health of transgender individuals. The aim of this study was to translate and evaluate the psychometric properties of the Persian 8-item IT scale among Iranian transgender individuals in order to enhance the quality and quantity of research in this field.

Materials and methods: This cross-sectional and methodological study utilized convenience sampling to recruit 119 transgender individuals in Mashhad, the second most populous city in Iran, in 2021. The Persian translation of the IT scale was developed using the backward-forward translation method. Subsequently, various types of validity and reliability were assessed, including content validity using the content validity index (CVI) and content validity ratio (CVR), face validity based on the impact score, construct validity through confirmatory factor analysis (CFA), internal consistency measured by Cronbach's alpha, and test-retest stability analyzed using the intraclass correlation coefficient (ICC).

Results: The CVR ranged from 0.600 to 1, the CVI ranged from 0.800 to 1, and the impact score exceeded 1.5, indicating the appropriate content and face validity of the 8-item IT scale. The construct validity analysis revealed that the questionnaire is one-dimensional. The internal consistency, as measured by Cronbach's alpha, was 0.917, and the ICC for test-retest stability was 0.871.

Conclusion: The Persian version of the IT scale demonstrated high and acceptable psychometric properties. The brevity of this scale facilitates its dissemination and utilization in clinical settings.

Keywords: Translations; Reproducibility of Results; Transgender Persons; Iran

Introduction

Transgender is a term that refers to people whose

gender identity, roles, and behaviors differ from those typically associated with the gender assigned at birth (1). Transgender people are classified as either binary (i.e. male-to-female or female-to-male trans) or non-binary (i.e. transgender people who do not identify with a binary view of identity such as genderqueer,

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bigender, etc). This group of people in society experiences 'minority stress' due to their identity conditions (2).

This stress has a chronic nature that social adversities; it includes experiences of stigma, non-acceptance, discrimination, violence, and experiences of victimization, and has adverse effects on mental health (2, 3). Anxiety disorders, depression, and suicidal thoughts are examples of negative consequences of minority stress (4, 5).

Testa and colleagues extended Meyer's minority stress model to the transgender and gender nonconforming population, based on the lived experiences of these people, and created the construct of minority stress and gender-related resilience (6). In this structure, distal and proximal stress factors and resilience factors of transgender non-conforming people are investigated (6). Internalized Transphobia (IT) is one of the subscales of Proximal Stress Factors of the transgender population which originates from within the trans person (6). Repeated confrontation with rejection, discrimination, and stigma leads to these negative messages received from society being internalized by the individual, and the perception of the individual, regardless of the accuracy of this belief, is in accordance with society's messages; This state is called IT (7). In other words, IT is an internal stigma among transgender people.

Clinical experiences with transgender populations in psychotherapy have shown that IT has been a common problem, which mainly manifests itself in three forms: 1) extreme shame and guilt towards the transgender identity (8). 2) Transgender people hide their unpleasant feelings of gender nonconformity and their identity from others, and they conform to stereotypes and binary conceptualizations of gender (8). 3) This state is derived from internalized negative messages from society or not disclosing one's gender diversity, which is outside of traditional stereotypes (8). On the other hand, if transgender people accept their gender identity and communicate with other transgender people, they can benefit from the support of their peers (8).

Since perceived stigma causes more mental suffering than real stigma, it has a double negative effect on mental health, including problems in emotional regulation and eating disorders (9). An increase in the level of IT of transgender leads to a person feeling shame and alienation towards his identity or other transgender (10). Due to the culture of Iranian society, many people avoid interacting with

transgender people (11). Transgender people are more vulnerable than others to depression, anxiety, fear, and risk of suicide (12). Transgender people experience exclusion and social pressure more than others (13).

So far, few studies have been conducted on the psychological problems of transgender people in Iran. Based on our knowledge, a questionnaire unique to transgender people has not been observed in the country, considering their lived experience. A sub-scale development in order to evaluate IT in Iranian society will help to improve the quantitative and qualitative studies in this field and will help the cultural growth of the society.

The Gender Minority Stress and Resilience (GMSR) scale is considered the most valid tool for measuring minority stress and resilience in transgender people (14). The 8-item IT scale is one of the dimensions of the GMSR scale which has been independently researched in several articles, and due to the importance of the consequences of this subscale, it has been the focus of studies (15-18).

With the increase of studies on gender minorities, a more accurate understanding of the internalization of negative messages from society by transgender and gender non-conforming people were welcomed by researchers and experimental studies (19). In the initial studies, due to the lack of appropriate tools to measure IT, they used the internalized stigma questionnaire (19). Considering the special characteristics of trans people, the internalized stigma questionnaire does not seem suitable for them, and it is felt necessary to create special tools for these people.

In this direction and in order to solve this shortcoming, Bockting and his colleagues developed the Transgender Identity Survey (TIS) scale (8). The TIS scale was designed with 26 items and 4 dimensions of pride, shame, alienation, and concern with passing to evaluate positive and negative attitudes and feelings of transgender people towards themselves (8).

The 8-item IT scale, with appropriate psychometric properties, can measure IT in research and clinical evaluations. One of the advantages of using this subscale, in addition to its brevity, is the use of the term gender identity or an expression instead of the term transgender identity, which makes it include a greater variety of transgender identities (8). The purpose of this study is to translate and examine the psychometric properties of the Persian version of the 8-item IT scale of the gender-related stress and resilience questionnaire.

Materials and methods

This cross-sectional study was conducted on all transgender who were referred to the Transgender Center of Ibn-Sina Hospital in Mashhad and the General Department of Forensic Medicine in Khorasan Razavi in 2021 for their treatment. Mashhad, with a population of more than 3.5 million people, is the second most populous city in Iran, located in the northeast of Iran.

Instrument: The 8-item IT is a part of the 58-item GMSR scale, which is based on Meyer's minority anxiety model (6, 14). Respondents expressed their level of agreement with the statements of the IT scale in 5-point Likert (1) strongly disagree (2) disagree (3) neither agree nor disagree (4) agree (5) strongly agree. The range of changes in the total score of the subscale is between 0 and 32; a higher score indicates higher levels of IT (6).

Translation: The IT was translated by backward-forward translation method on the basis of World Health Organization guidelines. Two translators separately translated the IT into Persian. They were mother-tongue Persian speakers with sufficient knowledge and expertise in the English language. Also, they provided a list of alternative words for some vocabulary. The translated versions in the Persian language were unified by the main researcher. This version was back-translated into the English language by two different English translators. The translated version in English was matched with the original version of the questionnaire by an English-speaking person who is fluent in the subject. Finally, the translation team evaluated all versions of the IT in a meeting and developed a pre-final version of IT.

Validity: Validity is the essential criterion in determining the accuracy of questionnaires. The validity is the agreement between the test score and the actual value of the attribute. In other words, a questionnaire has good validity when it measures the same concept that the creator intended. In this study in order to determine the validity of IT, the content, face, discriminative, and construct validity were evaluated.

Content validity: For Content validity of IT, the perspectives of 15 specialists were used. They had at least 5 years of experience working with transgender patients. These specialists determined the necessity and relevance of each item IT. If the Content Validity Ratio (CVR) and Content Validity Index (CVI) for each IT item were $\geq 49\%$, and $\geq 79\%$, respectively; this item could be kept in the questionnaire.

Face validity: To evaluate the qualitative face

validity, the translated version was given to ten transgender to identify and change the ambiguous words while responding to its items. To evaluate the quantitative face validity, the translated version was provided to 10 transgender and their opinions on the importance of the questionnaire items were obtained on a 5-point Likert scale to calculate the importance score. An impact score for any item greater than 1.5 was considered an acceptable value.

Construct validity: The Construct validity used the Confirmatory Factor Analysis (CFA) of 119 patients. A factor loading higher than 0.7 was considered acceptable.

Concurrent Validity: Concurrent validity was conducted as a part of criterion validity by using the correlation of General Health Questionnaire-28 (GHQ-28) along with its four factors separately including depression, anxiety and insomnia, social dysfunction, and somatic symptoms with IT. The GHQ-28 General Health Questionnaire was created by Goldberg and Hiller in 1979 to screen for mental disorders (20). Higher scores in this questionnaire indicate more problems in mental health (20). The psychometric properties of the Persian version of the GHQ-28 questionnaire have been confirmed in Iran (21). Intraclass Correlation Coefficient (ICC) was used to assess concurrent validity on 119 patients.

Reliability: Reliability refers to the accuracy of the measurement and the stability of the results by repeating the measurement. A reliable questionnaire must have a logical connection between different items or be homogeneous and have high internal consistency. It also must be consistent and equivalence. The results must be stable in test-retest and its results must be equal to or at least consistent with the results of another questionnaire that measures the same variable (10). For this study, in order to determine the reliability, the internal consistency and test-retest stability were measured. The time between the two evaluations was two weeks. This period was before patients start treatments and based on case history, they had no change in their conditions. ICC values above 0.8 or 0.9 are often regarded as a sign of good or excellent concurrent validity (22).

Ethical issues of research: This study was approved by the Ethics Committee of Mashhad University of Medical Sciences with the code of ethics: IR.MUMS.FHMPM.REC.1401.159. The participants were informed about the scientific nature of the research. Confidentiality and anonymity were

guaranteed and informed consent was obtained from the participants.

Data analysis: Content validity based on CVI and CVR, face validity based on impact score, construct validity based on CFA, concurrent validity based on ICC, internal consistency based on Cronbach’s α and Omega, composite reliability based on Average Variance Extracted (AVE), and test-retest stability based on ICC were examined. Statistical analysis was conducted using SPSS 25, AMOS 24, and Excel 2016. A P-value of less than 0.05 was considered significant.

Results

Translation: The questionnaire was translated based on the WHO method. The items were suitable based on the quality of translation and cultural adaptation.

Face validity: For quantitative measurement of face validity, the Impact score factor was used. For this purpose, the questionnaire was given to 10 patients. The Impact score of all 8 items was acceptable and higher than 1.5 (Table 1).

Table 1: Face and Content Validity Evaluation Indices

| Item Number | Impact Score | CVR | CVI | Interpretation |
|-------------|--------------|-------|-------|----------------|
| 1 | 4.90 | 0.733 | 0.867 | Remained |
| 2 | 4.90 | 1.000 | 1.000 | Remained |
| 3 | 4.80 | 0.867 | 0.933 | Remained |
| 4 | 4.80 | 0.733 | 0.867 | Remained |
| 5 | 4.80 | 0.875 | 1.000 | Remained |
| 6 | 4.14 | 0.600 | 0.800 | Remained |
| 7 | 4.90 | 1.000 | 1.000 | Remained |
| 8 | 4.90 | 0.867 | 0.933 | Remained |
| Total | 4.77 | 0.834 | 0.925 | Confirmed |

Content validity: The CVI and CVR were evaluated for each item. All items had a good score in both indexes. The mean score of all items is assessed as an index of content validity (S-CVI\Ave). This value was 0.925 which is higher than the reference value of 0.79 (Table 1).

The CVR ranged from 0.600 to 1 and CVI ranged from 0.800 to 1.

Concurrent Validity: The 8-item IT scale with The total score of General Health Questionnaire-28 (GHQ-28) along with its four factors separately Including depression, anxiety and insomnia, social dysfunction and somatic symptoms has a positive and significant ICC. After the total score, it has the highest ICC with the depression subscale and the lowest ICC with the social dysfunction subscale

(Table 2). These results indicated the confirmation of concurrent validity as part of the criterion validity of this subscale.

Table 2: Concurrent validity evaluation of 8-item IT with GHQ-28

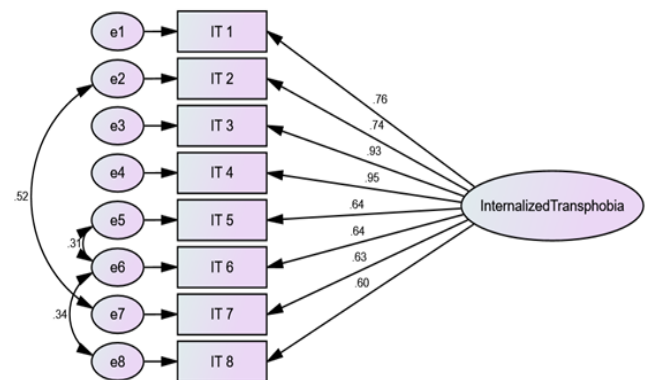
| Dimensions of GHQ-28 | Mean± SD score | ICC with IT |
|----------------------|-----------------|-------------|
| Depression | 4.411 ± 5.528 | 0.530* |
| Anxiety and insomnia | 5.907 ± 4.776 | 0.444* |
| Social dysfunction | 7.117 ± 4.117 | 0.286* |
| Somatic symptoms | 5.579 ± 4.375 | 0.335* |
| Total score | 23.016 ± 16.205 | 0.532* |

*Significant at less than 0.05

Construct validity: The age of 119 patients was 26.87 ± 6.83 years. Thirty-nine transgender had gender-matching surgery. More detailed information about the demographic characteristics of the research community is given in Table 3.

The mean IT score of the participants was 12.61 ± 9.79 . The highest correlation was between items 3 and 4 and the lowest correlation was between items 1 and 5 (Table 4).

The confirmatory factor analysis was used for



construct validity. The results of 119 patients were evaluated. The analysis indicated that the questionnaire was one-dimensional (Figure 1) and the Factor load values are greater than 0.4 which is within an acceptable range.

Figure 1: Conceptual Framework of Content Validity Assessment

The results of the goodness of fit index of the model are presented in Table 5.

Internal consistency: The Cronbach’s α and Omega were 0.917 and 0.851, respectively, which show acceptable Internal consistency. The composite reliability of the IT was equal to 0.934 and AVE was equal to 0.639.

Table 3: Demographic Characteristics of the Research Community

| Variable | | Number | Percent |
|---|----------------------------------|--------|---------|
| Gender | Female to Male | 97 | 81.5 |
| | Male to Female | 20 | 16.8 |
| | QUEER | 2 | 1.7 |
| Degree of Education | Under of Diploma | 9 | 7.6 |
| | Diploma | 42 | 35.3 |
| | Bachelor | 53 | 44.5 |
| | Master | 13 | 10.9 |
| | PhD | 2 | 1.7 |
| Gender-Matching Surgery | No | 80 | 67.2 |
| | Yes | 39 | 32.8 |
| Elapsed Time from Gender Matching Surgery | No | 80 | 67.2 |
| | Under of 2 Years | 17 | 14.3 |
| | Upper of 2 Years | 22 | 18.5 |
| Marital Status | Other | 21 | 17.6 |
| | Informal Emotional Relationship | 51 | 42.9 |
| | Married | 13 | 10.9 |
| | Divorce | 2 | 1.7 |
| | Separation without Divorce | 5 | 4.2 |
| | Not in an Emotional Relationship | 27 | 22.7 |

Test-retest stability: The ICC value for Test-retest Stability in 30 patients was 0.871. This value is acceptable.

Discussion

IT is one of the components of minority stress in the transgender population. People who suffer from this issue are directly at risk for negative mental health outcomes (23). The high prevalence of depression, anxiety, and suicide among transgender people has been reported in several studies (23). These adverse effects have also been confirmed in different cultures, which attracts the attention of mental health professionals (16, 24-28). Considering the importance of IT, this concept has been researched independently in many studies (15, 28-30), but there was no Persian version of it. The aim of this study was to translate and adapt the 8-item IT scale into Persian and

examine its psychometric properties.

In the process of translation, certified experts in the field of transgenderism were consulted and their opinions were applied so that the most suitable specialized vocabulary was selected, suitable for the transgender population of Iran, and the quality of the questionnaire was prioritized.

The psychometric properties of the 8-item IT scale as part of the GMSR scale have been evaluated and confirmed in Pakistan, Italy, and Spain (28, 31, 32).

Cronin et al used the 8-item IT scale independently of the other subscales of the GMSR scale in the research that evaluated the relationship between IT and well-being with the moderating role of attachment (15). In this study, Face validity was calculated by using the impact score factor in all the items and it was shown to be suitable.

Table 4: Correlation between Study Variables (n=30)

| | Mean ± SD | IT 1 | IT 2 | IT 3 | IT 4 | IT 5 | IT 6 | IT 7 | IT 8 |
|-------|------------|---------|---------|---------|---------|---------|---------|---------|---------|
| IT 1 | 1.48±1.65 | 1 | | | | | | | |
| IT 2 | 1.12±1.44 | 0.523** | 1 | | | | | | |
| IT 3 | 1.55±1.62 | 0.709** | 0.678** | 1 | | | | | |
| IT 4 | 1.66±1.68 | 0.748** | 0.699** | 0.886** | 1 | | | | |
| IT 5 | 1.43±1.56 | 0.414** | 0.630** | 0.594** | 0.582** | 1 | | | |
| IT 6 | 2.48±1.46 | 0.475** | 0.546** | 0.576** | 0.584** | 0.612** | 1 | | |
| IT 7 | 0.89±1.28 | 0.439** | 0.738** | 0.593** | 0.568** | 0.558** | 0.527** | 1 | |
| IT 8 | 2.01±1.58 | 0.370** | 0.514** | 0.577** | 0.545** | 0.462** | 0.611** | 0.561** | 1 |
| Total | 12.61±9.79 | 0.745** | 0.828** | 0.888** | 0.889** | 0.759** | 0.770** | 0.767** | 0.727** |

Table 5: Goodness of Fit Indices for Construct Validity Evaluation

| Index name | χ^2/df | CFI | TLI | RMSEA |
|------------------|---------------------|------------|------------|------------|
| Index value | 2.228 | 0.969 | 0.948 | 0.072 |
| Acceptable range | $1 < \chi^2/df < 3$ | > 0.9 | > 0.9 | <0.08 |
| Result | acceptable | acceptable | acceptable | acceptable |

CVI and CVR indices were used to evaluate content validity, which was within the acceptable range. In other psychometric studies, the content validity assessment tool was not mentioned (6, 28, 32).

In this study, the value of Cronbach's alpha coefficient was acceptable for evaluating the internal consistency in the interval, other psychometric properties studies (stated in Table 5) also reported the acceptable value of this index (14, 28, 32). Cronbach's alpha coefficient was reported as 0.89 in the original study of this scale, which is slightly lower than the alpha calculated in the present study (6). In the studies of Lee et al., Anzani et al., and Klein et al., Cronbach's alpha coefficient was reported as 0.88, 0.89, and 0.91, respectively (16, 29, 30).

Construct validity in this study was conducted using confirmatory factor analysis, and all factor loading and goodness of fit indices were acceptable. Testa et al., Hidalgo et al., and Scandurra et al. used confirmatory factor analysis to evaluate construct validity (Table 6), which was confirmed (6, 14, 28). However, Fatima et al. used the Item total correlation method to evaluate construct validity (32).

In the current study, 30 transgender people answered an 8-item IT scale again with an interval of

two weeks, and by comparing the two response stages, the test-retest reliability was calculated through ICC, which showed a favorable value. The test-retest reliability is not mentioned in other psychometric studies (6, 16, 28, 32).

In this study, the concurrent validity of 8-item IT scale was calculated with the total score of the GHQ-28 and 4 of its dimensions, separately. It had a significant positive correlation (ICC) with the total and all dimensions GHQ-28 (Table 7). Testa et al. used Center for Epidemiologic Studies Depression Scale (CES-D), Mini-Social Phobia Inventory (Mini-SPIN), Perceived General Life Stress (PGLS), and 12-item Interpersonal Needs Questionnaire (INQ-12) questionnaires to perform a simultaneous validity assessment of the 8-item IT questionnaire, which was confirmed (6). Hidalgo et al used General Parent Support (ParSup), Parental Non-Affirmation (P-NA), and Parental Affirmation (ParAff) questionnaires to evaluate the validity of the 8-item IT scale among Spanish adolescents (14). Positive correlation with Depression and Social Anxiety and negative correlation with scores obtained from ParSup, P-NA, and ParAff questionnaires indicated the acceptable validity of the 8-item IT scale (14).

Table 6: Comparison of the results of evaluation of psychometric characteristics of the present study with other studies

| Item | My Study | Testa et al (6) | Hidalgo et al (14) | Scandurra et al (28) | Fatima (32) | |
|--|--------------|-----------------|--------------------|----------------------|-------------|--------|
| | | | | | Female | Male |
| I resent my gender identity or expression. | 1.00* | 1.00* | 1.00* | 1.00* | 0.72** | 0.69** |
| My gender identity or expression makes me feel like a freak. | 0.852±0.100* | 0.97±0.03* | 0.945±0.068* | 1.09±0.10 | 0.84** | 0.87** |
| When I think of my gender identity or expression, I feel depressed. | 1.205±0.107* | 1.18±0.03* | 1.171±0.049* | 1.45±0.13* | 0.87** | 0.9** |
| When I think about my gender identity or expression, I feel unhappy. | 1.271±0.112* | 1.20±0.02* | 1.165±0.049* | 1.33±0.13* | 0.88** | 0.9** |
| Because my gender identity or expression, I feel like an outcast. | 0.795±0.111* | 0.98±0.03* | 1.030±0.050* | 1.13±0.13* | 0.86** | 0.87** |
| I often ask myself: Why can't my gender identity or expression just be normal? | 0.734±0.103* | 0.95±0.03* | 0.838±0.065* | 1.13±0.13* | 0.84** | 0.86** |
| I feel that my gender identity or expression is embarrassing | 0.646±0.091* | 0.98±0.02* | 0.914±0.053* | 1.03±0.11* | 0.75** | 0.84** |
| I envy people who do not have a gender identity or expression like mine. | 0.757±0.113* | 0.87±0.03* | 0.742±0.064* | 1.00±0.13* | 0.83** | 0.85** |

*Unstandardized loading factor ± SE **Item total correlation

Table 7: The method of evaluating the Criterion validity of 8-item IT in different studies

| Study | Description of how to evaluate |
|----------------------|--|
| My Study | ICC Between IT and GHQ-28: 0.532 ICC Between IT and Depression Dimension: 0.52 ICC Between IT and Anxiety and insomnia Dimension: 0.444 ICC Between IT and social dysfunction Dimension: 0.286 ICC Between IT and somatic symptoms Dimension: 0.335 |
| Testa et al (6) | Positive Correlations Between IT and Center for Epidemiologic Studies Depression Scale (CES-D): 0.49 Positive Correlations Between IT and Mini-Social Phobia Inventory (Mini-SPIN): 0.38 Positive Correlations Between IT and Perceived General Life Stress (PGLS): 0.47 Negative Correlations Between IT and 12-item Interpersonal Needs Questionnaire (INQ-12) (Belongingness): -0.44 Positive Correlations Between IT and INQ-12 (Burdensomeness): 0.50 |
| Hidalgo et al (14) | Positive Correlations Between IT and Depression: 0.39 Positive Correlations Between IT and Social Anxiety: 0.34 Negative Correlations Between IT and General Parent Support (ParSup): -0.36 Negative Correlations Between IT and Parental Non-Affirmation (P-NA): -0.37 Negative Correlations Between IT and Parental Affirmation (ParAff): -0.40 |
| Scandurra et al (28) | Positive Correlations Between IT and Severity Measure for Generalized Anxiety Disorder(SMGAD): 0.43 Positive Correlations Between IT and Severity Measure for Depression(SMDA): 0.45 Positive Correlations Between IT and Perceived Stress Scale: 0.43 |
| Fatima (32) | No Correlations Between IT and Hijra Perception of Attitude Towards Hijra's (HPHS) Scale: -0.08 |

Scandurra et al. used Severity Measure for Generalized Anxiety Disorder (SMGAD), Severity Measure for Depression (SMDA), and Perceived Stress Scale to evaluate the differential validity. All the correlations were below 0.60, which indicates the appropriate differential validity of the 8-item IT scale (28). Fatima et al. used Hijra Perception of Attitude Towards Hijra's (HPHS) Scale for convergent validity, which was not confirmed in contrast to previous studies, which could be due to the inappropriate choice of competing questionnaires (32). In Spain, Algarin et al reported a significant and positive relationship between IT and depressive, post-traumatic stress disorder (PTSD) symptoms, and perceived stress (31).

Finally, it can be said that the present study has shown that the 8-item IT scale with its one-dimensional structure has high and suitable psychometric properties and can be used in the research and clinical fields of the transgender population of Iran.

Conclusion

The resulting values have shown that 8-item IT has appropriate psychometric properties in the Iranian transgender community and can be used in studies. As stated, the gender-related stress and resilience questionnaire should increase the awareness of mental health professionals and clients, IT

considering the negative consequences it brings, the application of theory, clinical focus, and therapeutic considerations highlight this concept.

The findings of this study should be interpreted in light of several limitations. This study was conducted on the clients of the largest behavioral counseling center in Northeast Iran. Qualified people may not have been referred to this center, so the results may not be generalizable to society. The current study is limited to a subscale of the gender-related minority stress and resilience questionnaire. It is suggested that future studies normalize other subscales of this questionnaire. The difficulty of accessing transgender people is always one of the limitations of research in this population, which should be taken into account with the increase in the number of questionnaire items, as an example of the standardization of the entire questionnaire; of course, in this study, considering the number of questions The sample size requirements of the questionnaire have been met. Also, the limitation of access has denied the possibility of comparing the results between genders and different subgroups of transgender people. Another limitation of this study is the cross-sectional nature of its method, which did not allow the convergent validity to be thoroughly evaluated at different times.

Considering the lack of a specific scale for transgender people in Iranian society, the validation

of this scale is a start for the scale development unique for the transgender population in order to better understand their lived experiences. As a result, improve the quality of studies related to their psychological and treatment considerations.

Since the stress of the minority also has a cultural aspect, the actions taken in this direction will lead to cultural growth if they receive cultural attention. Also, future studies by examining the paths of IT; Among its consequences on various psychological components, and protective and mediating factors can achieve a more accurate and practical understanding of this subscale. Considering the lack of specific psychometric tools for the transgender population in Iran, it is suggested that in future studies, psychometric tools, including the transgender identity survey scale, should be validated for this population in Iran.

Conflict of Interests

Authors declare no conflict of interests.

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