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A Preliminary Validation of Gender Minority Stress and Resilience Measure in Turkish Transgender Individuals

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ABSTRACT

Transgender and Gender Non-Conforming (TGNC) individuals experience stress due to discriminatory events in society. This stress causes them to become vulnerable to physical and mental health problems. However, there is no validated scale that can be used in the assessment of TGNC people in counseling in Turkey. Gender Minority Stress and Resilience Measure (GMSR) is a scale that evaluates the stress and resilience factors of TGNC individuals. The aim of this study is to investigate the validity of the Turkish version of GMSR (GMSR-Tr). Our study presents preliminary evidence of the validity of the GMSR-Tr.

Introduction

Transgender and Gender Non-Conforming (TGNC) individuals are exposed to social stigma (Norton & Herek, 2013), violence (Testa et al., 2012), and prejudice (Clements-Nolle et al., 2006) in society in everyday life. The rates of physical assault, sexual assault, and verbal abuse due to gender identity vary between 26% and 80% (Nadal et al., 2016; Testa et al., 2012). After all, transgender people experience severe prejudice events, both in terms of frequency and intensity (James et al., 2016; Nadal et al., 2016). Social stress has been shown to have a strong impact on the lives of people who are stigmatized by social categories, including features like socioeconomic status, race/ethnic origin, gender or sexuality (Meyer, 1995, 2003). Allport (1954) suggested that prejudice creates a highly negative social environment for minorities and has a lasting negative impact on their personality. He said that minorities are exposed to social oppression and may tend to compensate for this with certain thoughts and behaviors such as refusal to identify with their own community, self-hatred, and internalizing stereotypes. Minority stress assumes that prejudice and stigma

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toward lesbian, gay and bisexual (LGB) individuals lead to unique social stress and that these stress factors lead to negative health consequences, including mental and physical disorders (Meyer & Frost, 2013). Minority Stress Model (MSM) was first conceptualized by Ilan H. Meyer, an American psychiatric epidemiologist, to investigate the impact of social stress experienced by sexual minority populations (lesbians, gays, bisexuals) on their physical and mental health (Meyer, 1995, 2003). The model has two stress and one resilience dimension. The first stress dimension in MSM is conceptualized as distal or external stress factors; it includes experiences of prejudice events related to sexual orientation (discrimination, rejection, violence, victimization). A second stress dimension of minority model is conceptualized as proximal or internal stress factors that include negative expectations for the future, internalized homophobia (internalized negative beliefs about one's own sexual orientation), and the stress of hiding the sexual identity from others.

Even though MSM was specifically designed for LGB individuals, several studies indicate that TGNC community also experiences high rates of minority stressors (physical and sexual violence, discrimination, and stigma) (Grant et al., 2010; Kenagy, 2005; Marcellin et al., 2013). In recent years, MSM was expanded to include stress factors experienced by TGNC (Hendricks & Testa, 2012). The Gender Minority Stress and Resilience (GMSR) model was developed by Testa and colleagues by expanding Meyer's model by considering the factors specific to TGNC people (Testa et al., 2015). Like MSM, the GMSR model describes distal and proximal stress factors to conceptualize internal and external stressors and resilience factors that buffer the stresses (Figure 1; Testa et al., 2015).

Focus of the study

Transgender individuals may have very different experiences of discrimination in the world. Every country presents their specific approaches to minority groups regarding legal regulations and social contexts. Unfortunately, Turkey's social structure and legal arrangements cannot be classified as supportive or protective for TGNC individuals. In Turkey, being Transgender (or homosexual) is not criminalized but there are no protective and anti-discriminative regulations for TGNC individuals. The gender transition process in Turkey is regulated by the law, in the Turkish Civil Code (Numbered 4721) article 40; while in some countries, a formal gender change is possible only through "declaration" of the transgender individuals. The local court determines whether a transgender person can undergo gender-affirming surgery or not, based on legal regulations. The applicant is referred by the court to a tertiary (conducting
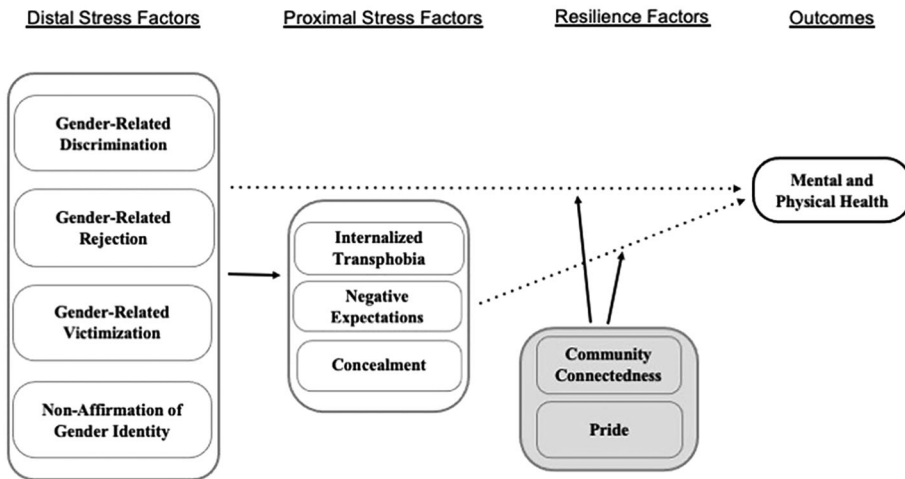
Figure 1. Gender minority stress model as proposed by Testa et al. (2015). Dashed lines indicating inverse relationships.

medical training and research) for multidisciplinary assessments and follow-up. This makes the process much more medicalized and legally controlled for TGNC individuals than being supportive or protective.

Additionally, Turkey has the country with the highest rate of transphobic hate crimes among European countries (Transgender Europe, 2013). However, there is no social policy that protects transgender people against hate crimes. Studies conducted in Turkey show high rates of mental disorders and a history of suicide attempts among TGNC individuals (Kaptan, 2010; Turan et al., 2015; Yüksel et al., 2017). Therefore, bringing a validated scale into Turkey will pave the way for more comprehensive follow-up periods and also more systematized studies on understanding the mental states of TGNC individuals. There is no valid measurement tool in Turkish to assess TGNC individuals in counseling. The present study evaluated the validation features of the Turkish version of GMSR in a sample of Transgender people who were in their gender transition process. We believe that this scale may help both quantitatively and qualitatively bring out the minority stress and resilience concepts in the field of trans mental health in Turkey, and as the number of study reports increases the awareness of the society. The present study evaluated the validation features of the Turkish version of GMSR in a sample of Transgender people who were in their gender transition process. The results of this study can be used for both research and counseling to assess both distal and proximal minority stressors, as well as resilience factors experienced by TGNCs. Thus, the validity study of the GMSR-Tr

Measure is noteworthy in terms of lacking literature, and it is believed to encourage further research.

In the current study, we tested these assumptions specific to validity of Turkish version of GMSR.

Assumption 1: The model validity, GMSR-Tr measure is valid in the three-factor structure model (Distal Stress Factors, Proximal Stress Factors, Resilience Factors). Internal consistency reliability of each scale with high Cronbach's alpha values.

Assumption 2: GMSR-Tr has the criterion validity; each of the seven stress scales (*Discrimination, Rejection, Victimization, Non-Affirmation, Internalized Transphobia, Negative Expectation,* and *Concealment*) will correlate positively with depression and anxiety scale scores.

Assumption 3: Both two resilience scales (*Pride* and *Community Connectedness*) will correlate negatively with depression and anxiety scale scores.

Assumption 4: GMSR-Tr has convergent validity; each of the seven stress scales will correlate positively with perceived life stress scale scores.

Assumption 5: *Community Connectedness* scale will correlate positively with perceived social support scale scores.

Assumption 6: GMSR-Tr has discriminant validity; all the GMSR scales were distinct from each other as evidenced by low correlation coefficient values.

Method and materials

Participants

The sample group was recruited from trans individuals who were in their gender transition processes. The participants were referred from the courts to the Department of Psychiatry, Istanbul University Istanbul Faculty of Medicine for a professional medical opinion on gender transition approval. The inclusion criterion for minimum age was set to the age of consent, which is 18 in Turkey. Diagnostic and Statistical Manuel 5th edition (DSM-5) is considered for the diagnosis of gender dysphoria (American Psychiatric Association [APA], 2013). Thus, the inclusion criteria were aged 18 and older, fulfilling the diagnostic criteria for gender dysphoria according to DSM-5. Limited mental capacity to understand and complete the clinical interviews and the self-report measures and have not to the ability to read and write were the exclusion criteria of our study.

Procedure

Participants who were on the waiting list for the gender transition process were contacted via phone and invited to participate in this study. Semi-structured psychiatric interviews were conducted with participants. GMSR-Tr was applied in face-to-face interviews with those individuals diagnosed with Gender Dysphoria according to DSM-V. Additionally, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Multidimensional Scale of Perceived Social Support (MSPSS), and Perceived Stress Scale (PSS) were administered.

The study was approved by the ethics committee of Istanbul University Istanbul Faculty of Medicine (2019/443). Written informed consent was obtained from all participants.

Questionnaire instruments

The GMRS consists of 58 items in 9 scales: 7 scales of stress and 2 scales of resilience. The scale has 3 dimensions: Proximal and Distal Stress Factors and Resilience Factors. The conceptual framework of the factors can be stated as follows:

Gender-related Discrimination, Gender-related Rejection, Gender-related Victimization, and Non-Affirmation of gender identity scales constitute the Distal Stress Factor of the GMSR.

Internalized Transphobia, Negative Expectations for future events, and Concealment scales measure the Proximal Stress Factor of the subjective attributions of the individual.

Community Connectedness and Pride scales are to address resilience which has a buffering effect against minority stress and has an association with negative mental health outcomes.

Since scale scores are not specific to any psychopathological condition, they do not indicate any psychiatric disorder. A total score is not calculated, scores from each factor are considered for evaluation. Higher scores in Proximal and Distal Stress Factors demonstrate the increase in negative mental health outcomes. Resilience Factor scores indicate the protective factor against minority stress. (See GMSR in Appendix A)

Translation process of the Turkish version of GMSR Measure was completed in four stages. In the first stage, the scale was translated to Turkish by two native Turkish speaker research assistants, independent of each other. In the second stage, a Turkish draft form was created with the agreed translations in these two different Turkish translations by two research assistants and a professor. In the third stage, the Turkish form of the scale was back-translated to English by a native English speaker. In the last step, the translated scale was compared with the original English

version. The final Turkish version was created from sentences that fit the original form after being back-translated.

Multidimensional Scale of Perceived Social Support (MSPSS)

The MSPSS scale was developed as a tool to determine the perceived social support factors (Eker et al., 2001; Zimet et al., 1988). The scale consists of 12 items. Respondents are asked to rate every item between 1 (absolutely no) to 7 (absolutely yes). The scale has three subscales consisting of four items to determine family, friends, and special person support. Higher scores indicate higher perceived social support.

Perceived Stress Scale (PSS)

The PSS is a 14-question self-assessment scale developed to measure the extent to which a person perceives his life as unpredictable, uncontrollable or overloaded (Cohen & Williamson, 1988). In this frequently used scale, individuals are asked to rate between 0 (never) and 5 (very often) on how often they have experienced certain feelings or thoughts in the last month. The total score indicates the perceived stress level of the respondent, and a high score indicates a high perceived stress level. The Turkish validity and reliability study of the BDI was conducted by Eskin et al. (2013).

Beck Depression Inventory (BDI)

BDI was developed by Beck (1961) in order to determine the presence of depression and measure the severity of depressive symptoms. The inventory consists of 21 items and every item is rated between zero (positive statements about depression) and three (negative statements about depression). Scores between 14 and 20 indicate minor, 21 and above scores indicate major depression. The Turkish validity and reliability study of the BDI was conducted by Hisli (1989).

Beck Anxiety Inventory (BAI)

BAI measures the severity of anxiety symptoms experienced by the respondents (Beck et al., 1988). This self-assessment scale consists of 21 items assessing subjective anxiety and physical symptoms; in which every item can be rated between 0 and 3. Scores between 0–7 are classified as minimal, 8–15 are mild, 16–25 are moderate, and 26 and above scores indicate a severe level of anxiety. Turkish validity and reliability study of the BAI was conducted by Ulusoy et al. (1998).

Data Analysis

Descriptive statistics of participants' sociodemographic characteristics were presented as mean, standard deviation, and percentage. Cronbach's alpha values were calculated of the internal consistency for the scales. Factor analysis was performed using Varimax methods based on Principal Component Analysis and Kaiser Normalization.

Criterion validity of GMSR was measured using scores of depression, anxiety, perceived stress, and perceived social support with Spearman correlation method. Since there were violations of normality in the groups (checked by the Kolmogorov-Smirnov test) while comparing sociodemographic characteristics' subgroups Mann Whitney U test, and for more than two groups Kruskal Wallis and post hoc Dunn tests were used. Chi-squared test and Fisher's exact test were used to compare the distributions of categorical variables.

We used IBM Statistical Package for the Social Sciences (SPSS) 20th edition for data analysis. p Values of less than 0.05 were regarded as statistically significant in all tests.

Results

Sociodemographic characteristics of sample

The data of this study was obtained from 48 participants with diagnosis of gender dysphoria. Participants described themselves as trans men (66.7%), and trans women (33.3%). The mean age was 28.6 ± 8.1, ranging from 18 to 48 years. According to gender identities: the mean age of trans women was 28.8 ($SD = 8.0$) and 28.5 ($SD = 8.3$) for trans men. There was no significant difference between the mean ages of two groups ($p > 0.05$).

Sociodemographic variables; gender identity, age, living environment (urban, suburban, or rural), and annual income are seen in Table 1. There was no significant difference in educational level, working status, monthly income, and living place between trans men and trans women ($p > 0.05$).

Participants' BDI, BAI, PSS, and MPSS mean values are 13.4(9.2), 12.7(9.3), 26.2(10.8), and 47.7(17.5) respectively. There was no significant difference in depression, anxiety, stress, and social support level according to gender identity.

Assumption 1: factor analysis

A factor analysis of the GMSR was run as presented in Assumption 1. Kaiser-Meyer-Olkin values of the GMSR's three factors showed that the sampling was adequate (Distal Stress Factor: 0.59; Proximal Stress Factor: 0.71; and Resilience Factor: 0.78). Homogeneity of the variance among the

Table 1. Sociodemographic Characteristics of Participants.

Sociodemographic variables	Mean (*SD*)
Age	
Total	28.6 (8.1)
Trans Female	28.8 (8)
Trans Male	28.5 (8.3)
	n (%)
Participants	
Total	48 (100%)
Trans Female	16 (33.3%)
Trans Male	32 (66.7%)
Education	
Can read&write only	1 (2.1%)
Primary School (5 years)	4 (8.3%)
Mid-school (8 years)	10 (20.8%)
High School	25 (52.1%)
University	8 (16.7)
Working status	
Employed	27 (56.3%)
Unemployed	27 (56.3%)
Income (per month)	
<2000 TL (low)	25 (52.1%)
2000–5000 TL (mid)	18 (37.5%)
>5000 TL (high)	5 (10.4 %)
With who they live	
Alone	10 (20.8%)
Family	28 (58.3%)
Friend	2 (4.2%)
Partner	6 (12.5%)
Others	2 (4.2%)
Residency	
Istanbul	38 (79.2%)
Out of Istanbul	10 (20.8%)

TL: Turkish Liras.

GMSR factors was assessed with Bartlett's chi-square, indicating that the data were normally distributed (Distal Stress Factor $\chi^2 = 398.91$; $p < 0.001$, Proximal Stress Factor $\chi^2 = 809.19$; $p < 0.001$, Resilience Factor $\chi^2 = 454.59$; $p < 0.001$). Factors of the GMSR were also found to have internal consistency with Cronbach's alphas were 0.84 for Distal Stress Factor, 0.91 for Proximal Stress Factor, and 0.89 for Resilience Factor. In addition, all scales' Cronbach's alpha values were greater than 0.5 except for discrimination ($\alpha = 0.28$) and rejection ($\alpha = 0.32$) scales (Table 2).

Assumptions 2 and 3: criterion validity

Criterion validity analysis of the GMSR revealed that two stress factors and seven stress scales of GMSR have positive correlations with both anxiety and depression scale scores, except victimization scale. This result confirmed our second assumption. Resilience Factor and two resilience scales (*Community Connectedness* and *Pride*) correlated negatively with depression and anxiety scale scores; thus confirming our third assumption. Effect sizes ranged from 0.23 to 0.79. Correlational analyzes results for Assumptions 2 and 3 are shown in Table 3.

Table 2. Distal and Proximal Stress Factors; Scales and Items, Mean and Standard Deviation, Correlation Coefficient, Factor Loading values.

Factors Scales and items	Scores Mean (SD)	Range	Correlation Coefficient (α)	Factor Load
Distal Stress Factors (23 items)	23.71 (8.9)	0–41	0.843	
Gender-related Discrimination (D)	2.98 (1.14)	0–5	0.28	
1	0.63 (0.49)			0.345
2	0.96 (0.20)			0.600
3	0.69 (0.46)			0.584
4	0.27 (0.44)			0.632
5	0.50 (0.50)			0.713
Gender-related Rejection (R)	3.65 (1.3)	0–6	0.32	
1	0.63 (0.49)			0.560
2	0.33 (0.47)			0.440
3	0.60 (0.49)			0.508
4	0.69 (0.47)			0.593
5	0.69 (0.47)			0.442
6	0.83 (0.38)			0.586
Gender-related Victimization (V)	1.71 (1.17)	0–6	0.55	
1	0.94 (0.24)			0.471
2	0.17 (0.48)			0.484
3	0.15 (0.35)			0.663
4	0.15 (0.35)			0.714
5	0.21 (0.41)			0.640
6	0.13 (0.33)			0.488
Non-Affirmation of Gender identity (NA)	15.38 (6.83)	0–20	0.89	
1	3.02 (1.37)			0.535
2	2.75 (1.45)			0.752
3	2.23 (1.56)			0.669
4	1.85 (1.46)			0.722
5	2.50 (1.49)			0.820
6	3.06 (1.26)			0.793
Proksimal Stress Factors (23 items)	46.60 (17.08)	0-88	0.911	
Internalized Transphobia (IT)	14.44 (8.92)	0–32	0.90	
1	1.15 (1.33)			0.802
2	1.40 (1.38			0.783
3	1.77 (1.58)			0.930
4	1.77 (1.56)			0.928
5	2.42 (1.49)			0.534
6	2.67 (1.49)			0.510
7	0.85 (1.25)			0.838
8	2.44 (1.59)			0.669
Negative Expectation for the future (NE)	20.5 (6.73)	0–36	0.84	
1	2.29 (1.30)			
2	2.67 (1.41)			0.572
3	2.81 (1.08)			0.677
4	3.00 (1.07)			0.755
5	3.04 (0.96)			0.715
6	2.94 (1.04)			0.804
7	1.69 (1.35)			0.768
8	0.60 (1.16)			0.572
9	0.63 (1.00)			0.906
				0.701
Concealment (C)	12.79 (5.09)	0–20	0.76	
1	3.08 (1.30)			0.431
2	2.06 (1.63)			0.739
3	2.23 (1.52			0.505
4	3.50 (0.85)			0.336
5	1.96 (1.63)			0.733

Extraction Method: Principle Component Analysis, Rotation Method: Varimax with Kaiser normalization.
Distal Stress Factor: *Total variance explained: 49.89%,* Chi-square: 453.594, $p < 0.001$. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)= 0.588 $n = 48$.
Proximal Stress Factor: *Total variance explained: 59.22%,* Chi-square: 809.191, $p < 0.001$. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)= 0.713 $n = 48$.

Table 3. Resilience Factor; Scales, Items, Mean and Standard Deviation, Correlation Coefficient, Factor Loading values.

| Factors Scales and items | Scores | | Correlation Coefficient (α) | Factor Load |
	Mean (SD)	Range		
Resilience Factor (13 items)	21.52 (12.86)	0–52	0.89	
Pride (P)	13.19 (8.04)	0–32	0.87	
1	1.73 (1.30)			0.788
2	1.42 (1.38)			0.608
3	1.15 (1.30)			0.495
4	1.56 (1.48)			0.870
5	1.67 (1.28)			0.907
6	1.94 (1.40)			0.679
7	1.69 (1.53)			0.729
8	2.08 (1.54)			0.567
Community Connectedness (CC)	8.33 (6.82)	0–20	0.89	
1	1.75 (1.59)			0.795
2	1.65 (1.67)			0.845
3	1.73 (1.68)			0.845
4	1.71 (1.47)			0.708
5	1.80 (1.51)			0.800

Extraction Method: Principle Component Analysis, Rotation Method: Varimax with Kaiser normalization.
Resilience Factor: Total variance explained: 61.08%, Chi-square: 398.912, $p < 0.001$. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)= 0.786 $n = 48$.

Assumptions 4 and 5: convergent validity

Regarding assumption 4, convergent validity analysis of the GMSR showed that all stress scales significantly correlated with perceived stress except victimization. Correlation coefficients ranged from 0.33 to 0.62. Similarly, *Community Connectedness* scale correlated positively with all the scales of the perceived social support measures, confirming our 5th assumption. Correlation coefficients ranged from 0.38 to 0.66 (Table 3).

Assumption 6: discriminant validity

The discriminant validity of the GMSR measure was demonstrated by the correlation of all GMSR scales with each other below 0.60 (except correlation between *Rejection* and *Non-Affirmation* scales, which was 0.70 and *Non-Affirmation* and *Internalized Transphobia* which was 0.63).

Discussion

This study aimed to evaluate the psychometric characteristics of the GMSR measure in a sample of Turkish transgender individuals. Our study revealed preliminary evidence of the validity of the Turkish version of the GMSR for transgender people in the process of gender transition. To the best of our knowledge, this scale is the first tool to evaluate minority stress and resilience in transgender populations in Turkey.

According to criterion validity analysis, both Distal and Proximal Stress Factors and six of the seven stress scales (exception is victimization) had positive correlations with anxiety and depressive symptoms. These findings

Table 4. Relations Between GMSR Factors, Scales and Depression, Anxiety, Perceived Stress and Social Support.

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1-GMSR Distal Stress Factor															
2-GMSR-D	.67**														
3-GMSR-R	.81**	.59**													
4-GMSR-V	.44**	.50**	.29*												
5-GMSR-NA	.93**	.45**	.70**	.26											
6-GMSR Proximal Stress Factor	.67**	.49**	.61**	.29*	.64**										
7-GMSR-IT	.62**	.40**	.55**	.12	.63**	.86**									
8-GMSR-NE	.47**	.48**	.47**	.34*	.41**	.76**	.40**								
9-GMSR-C	.48**	.30*	.46**	.25	.46**	.81**	.57**	.57**							
10-GMSR Resilience Factor	−.45**	−.34*	−.46**	.01	−.45**	−.74**	−.75**	−.44**	−.61**						
11-GMSR-P	−.16	−.16	−.21	.19	−.18	−.56**	−.53**	−.38**	−.45**	.82**					
12-GMSR-CC	−.59**	−.48**	−.53**	−.17	−.54**	−.72**	−.73**	−.38**	−.62**	.86**	.47**				
13-BDI	.57**	.40**	.55**	.23	.52**	.79**	.82**	.51**	.58**	−.73**	−.41**	−.79**			
14-BAI	.46**	.45**	.40**	.26	.38**	.67**	.64**	.49**	.49**	−.65**	−.40**	−.74**	.75**		
15-PSS	.38**	.33*	.45**	.14	.35*	.64**	.62**	.44**	.46**	−.67**	−.55**	−.61**	.67**	.72**	
16-MPSS	−.41**	−.25	−.53**	−.25	−.37*	−.62**	−.59**	−.40**	−.53**	.64**	.47**	.66**	−.66**	−.53**	−.66**

Abbreviations. GMSR: Gender and Minority Stress and Resilience Measure; GMSR-D: Gender-related Discrimination; GMSR-R: Gender-related Rejection; GMSR-V: Gender-related Victimization; GMSR-NA: Non-affirmation of Gender identity; GMSR-IT: Internalized Transphobia; GMSR-NE: Negative Expectation for the Future; GMSR-C: Concealment; GMSR-P: Pride; GMSR-CC: Community Connectedness; BDI: Beck Depression Inventory; BAI: Beck Anxiety Inventory; PSS: Perceived Stress Scale; MSPSS: Multidimensional Scale of Perceived Social Support.

*p < .05; **p < 0.001.

are consistent with MSM, and studies conducted with GMSR show that both Distal and Proximal Stress Factors have relations with negative mental health outcomes (Meyer, 2003; Scandurra et al., 2020; Testa et al., 2015). Besides, Resilience Factor, Pride, and Community Connectedness scales showed significant negative correlations with depression and anxiety scale scores. This finding is also consistent with MSM and with the research highlighting that resilience factors protect TGNC individuals against the negative effects of stigma on health (Breslow et al., 2015; Scandurra et al., 2017, Testa et al., 2014). Consistent with the results of other studies conducted with transgender individuals in Turkey showed that the quality of life of transgender individuals increased as they perceived discrimination less (Başar et al., 2016), and low resilience in Turkish TGNC individuals was found to be related to mental and behavioral problems (Başar et al., 2016).

Analysis of convergent validity revealed that Distal and Proximal Stress Factors, and six of the seven stress scales were positively correlated with perceived general life stress. Perceived general life stress had a negative significant relationship with the Resilience Factor. Contrary to expectations, gender-related victimization did not significantly correlate with depression, anxiety, and perceived stress scores. While in the Italian GMSR validation study victimization was found to be related to depression, anxiety, and stress, these relationships had not been reported for depression and stress scales in the original study (Testa et al., 2015; Scandurra et al., 2020). Some studies are reporting that gender-related discrimination, victimization, and stigmatization lead to proximal stressors (Internalized Transphobia, Negative Expectations, Concealment scales of the GMSR), and have a relationship with negative mental health outcomes (Bazargan & Galvan, 2012; Boza & Perry, 2014). Besides the small sample size, this may be because our sample group consisted of only transgenders who applied for the gender transition process. Thus, our study sample may not reflect the whole TGNC population in terms of victimization experience.

The positive significant relationship between Community connectedness scale and MSPSS scores was another result supporting the convergent validity of the measure. Community connectedness shows transgender individuals' relationship with the trans community. In accordance with the original study, our study showed that the Resilience Factor and its' each scale; Community Connectedness and Pride were positively correlated with MSPSS scores. The stress scores of GMSR-Tr were similar to the original study of the measure (Testa et al., 2015) and to another study conducted in the USA with the GMSR (Brennan et al., 2017).

As we evaluated all the results regarding our assumptions, the preliminary findings suggest that the GMSR-Tr scales have independent structures

and these scales individually present significant information. The only exception was observed in Gender-related Discrimination and Rejection scales, which did not show high internal consistency reliability. However, even in the original and Italian versions of the GMSR, these scales also had lower internal consistency compared to all other scales (Testa et al., 2015; Scandurra et al., 2020).

Limitations & future research

The present study has several limitations. The results of this study should be interpreted in light of these limitations. Firstly, the sample represents a small Turkish transgender population accessing health care for the gender transition process, the sample may not be representative of all segments of the society, so these findings should be interpreted cautiously. Secondly, our sample does not include gender diversity because our participants applied for the gender transition process and defined themselves as trans men or trans women. We believe our colleagues who would conduct research with this scale will provide additional results for clarifying our findings, though considering these limitations.

We believe that by repeating the validation with a large and diverse sample and expanding it to standardization of GMSR, the measure will find its place in both counseling use and research. Our motivation for the future is to continue collecting data and to study in a larger non-clinical sample group, including all gender diversities

Implications for practice

This scale would help to diminish the counsellors' subjectivity when they counsel a transgender person. GMSR allows screening the minority stress factors, such as experiences of discrimination and some negative beliefs which may not be directly expressed by the client. Besides that, the study, in which we observed the protective power of community connectedness and pride, showed that the resilience factors could be used in support groups for transgender.

Consclusion

Overall, this study provides preliminary evidence of the validity of the Turkish version of the Gender Minority Stress and Resilience measure. We concluded that GMSR-Tr measure is a useful tool for researchers for future studies and a valid screening tool in counseling interviews. This scale would not only improve the psychological assessment of TGNC individuals but also will set goals or priorities for intervention.

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Appendix A. The Gender Minority Stress and Resilience Measure (Testa et al., 2015).

Gender-related discrimination

Response options: *Never*; *Yes, before age 18*; *Yes, after age 18*; *Yes, in the past year*

1. I have had difficulty getting medical or mental health treatment (transition-related or other) because of my gender identity or expression.
2. Because of my gender identity or expression, I have had difficulty finding a bathroom to use when I am out in public.
3. I have experienced difficulty getting identity documents that match my gender identity.
4. I have had difficulty finding housing or staying in housing because of my gender identity or expression.
5. I have had difficulty finding employment or keeping employment, or have been denied promotion because of my gender identity or expression.

Gender-related rejection

Response options: *Never*; *Yes, before age 18*; *Yes, after age 18*; *Yes, in the past year*

1. I have had difficulty finding a partner or have had a relationship end because of my gender identity or expression.
2. I have been rejected or made to feel unwelcome by a religious community because of my gender identity or expression.
3. I have been rejected by or made to feel unwelcome in my ethnic/racial community because of my gender identity or expression.
4. I have been rejected or distanced from friends because of my gender identity or expression.
5. I have been rejected at school or work because of my gender identity or expression.
6. I have been rejected or distanced from family because of my gender identity or expression.

Gender-related victimization

Response options: *Never*; *Yes, before age 18*; *Yes, after age 18*; *Yes, in the past year*

1. I have been verbally harassed or teased because of my gender identity or expression. (For example, being called "it")
2. I have been threatened with being outed or blackmailed because of my gender identity or expression.
3. I have had my personal property damaged because of my gender identity or expression.
4. I have been threatened with physical harm because of my gender identity or expression.
5. I have been pushed, shoved, hit, or had something thrown at me because of my gender identity or expression.
6. I have had sexual contact with someone against my will because of my gender identity or expression.

Non-affirmation of gender identity

Response options: 5-point scale from *strongly disagree* to *strongly agree*

1. I have to repeatedly explain my gender identity to people or correct the pronouns people use.
2. I have difficulty being perceived as my gender.
3. I have to work hard for people to see my gender accurately.
4. I have to be "hypermasculine" or "hyperfeminine" in order for people to accept my gender.
5. People don't respect my gender identity because of my appearance or body.
6. People don't understand me because they don't see my gender as I do.

Internalized transphobia

Response options: 5-point scale from *strongly disagree* to *strongly agree*

1. I resent my gender identity or expression.
2. My gender identity or expression makes me feel like a freak.
3. When I think of my gender identity or expression, I feel depressed.
4. When I think about my gender identity or expression, I feel unhappy.
5. Because my gender identity or expression, I feel like an outcast.
6. I often ask myself: Why can't my gender identity or expression just be normal?
7. I feel that my gender identity or expression is embarrassing.
8. I envy people who do not have a gender identity or expression like mine.

Pride

Response options: 5-point scale from *strongly disagree* to *strongly agree*

1. My gender identity or expression makes me feel special and unique.
2. It is okay for me to have people know that my gender identity is different from my sex assigned at birth.
3. I have no problem talking about my gender identity and gender history to almost anyone.
4. It is a gift that my gender identity is different from my sex assigned at birth.
5. I am like other people but I am also special because my gender identity is different from my sex assigned at birth.
6. I am proud to be a person whose gender identity is different from my sex assigned at birth.
7. I am comfortable revealing to others that my gender identity is different from my sex assigned at birth.
8. I'd rather have people know everything and accept me with my gender identity and gender history.

Question to determine appropriate wording for items regarding negative expectations for the future and nondisclosure: Do you currently live in your affirmed gender* all or almost all of the time?
(*Your affirmed gender is the one you see as accurate for yourself.)
Response options: *Yes, I live in my affirmed gender most or all of the time*; *No, I don't live in my affirmed gender most or all of the time* If *yes*: use "history" in items below. If *no*: use "identity" in items below.

Negative expectations for the future

Response options: 5-point scale from *strongly disagree* to *strongly agree*

1. If I express my gender IDENTITY/HISTORY, others wouldn't accept me.
2. If I express my gender IDENTITY/HISTORY, employers would not hire me.
3. If I express my gender IDENTITY/HISTORY, people would think I am mentally ill or "crazy."
4. If I express my gender IDENTITY/HISTORY, people would think I am disgusting or sinful.
5. If I express my gender IDENTITY/HISTORY, most people would think less of me.
6. If I express my gender IDENTITY/HISTORY, most people would look down on me.
7. If I express my gender IDENTITY/HISTORY, I could be a victim of crime or violence.
8. If I express my gender IDENTITY/HISTORY, I could be arrested or harassed by police.
9. If I express my gender IDENTITY/HISTORY, I could be denied good medical care.

Nondisclosure

Response options: 5-point scale from *strongly disagree* to *strongly agree*

1. Because I don't want others to know my gender IDENTITY/HISTORY, I don't talk about certain experiences from my past or change parts of what I will tell people.
2. Because I don't want others to know my gender IDENTITY/HISTORY, I modify my way of speaking.
3. Because I don't want others to know my gender IDENTITY/HISTORY, I pay special attention to the way I dress or groom myself.
4. Because I don't want others to know my gender IDENTITY/HISTORY, I avoid exposing my body, such as wearing a bathing suit or nudity in locker rooms.
5. Because I don't want others to know my gender IDENTITY/HISTORY, I change the way I walk, gesture, sit, or stand.

Community connectedness

Response options: 5-point scale from *strongly disagree* to *strongly agree*

1. I feel part of a community of people who share my gender identity.
2. I feel connected to other people who share my gender identity.
3. When interacting with members of the community that shares my gender identity, I feel like I belong.
4. I'm not like other people who share my gender identity. (R)
5. I feel isolated and separate from other people who share my gender identity. (R)

Note. Scale names are included for researcher information only; they are not intended to be shared with participants responding to the questionnaire. a Wording for items regarding negative expectations for the future and nondisclosure varies. Respondents endorsing that they live in their affirmed gender all or almost all of the time are presented with the word "history"; respondents indicating that they do not live in their affirmed gender all or almost all of the time are presented with the word "identity.".