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# **The buffer of resilience in the relations of gender-related discrimination, rejection, and victimization with depression among Chinese transgender and gender non-conforming individuals**

## **Abstract**

*Background:* According to the minority stress theory, the minority stressors of gender-related discrimination, rejection, and victimization will increase depression in the transgender and gender non-conforming (TGNC) population. However, few studies focused on these relations in the context of mainland China, and the positive perspective of their resilience still remained unstudied.

*Methods:* This cross-sectional study recruited 361 TGNC individuals through the online community of TGNC people. The participants were involved in this study by measuring their experiences of gender-related discrimination, rejection, victimization, resilience, and depression. The SPSS and PROCESS were used to assess the relations of the studied variables.

*Results:* High rates of gender-related discrimination, rejection, and victimization were reported by TGNC participants in this study (80.1%, 98.9%, and 77.0% accordingly). The participants who had experienced gender-related discrimination and victimization showed a significantly higher level of depression than those who never experience such unfair treatments. Besides, gender-related discrimination and resilience significantly contributed to the variance of the depression ( $R^2$  adjusted=0.344,  $F=21.674$ ,  $p<0.01$ ),

and their resilience was found to play a moderating role between discrimination and depression.

*Limitations:* A longitudinal study may need to examine the causal effects, and the limitations of the online data should be noted.

*Conclusions:* The Chinese TGNC people are living in a relatively unfavorable environment with experiencing high rates of gender-related unfair treatments, which can be detrimental to their mental health status. However, their resilience can be a buffer for them in facing adversity. Intervention and educational programs might be developed accordingly.

*Keywords:* transgender, gender non-conforming, minority stressor, depression, Chinese context

## 1. Introduction

Transgender and gender non-conforming (TGNC) people is an umbrella term, which refers to various groups of individuals who feel incongruence between their sex assigned-at-birth and their gender identity, such as transgender people, genderqueer, and gender non-binary people (American Psychological Association, 2015; Sutter, 2017). TGNC people were first officially defined as people with transsexualism in *the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III*, American Psychiatric Association, 1980). In 1994, the definition of this group of people was revised as people with Gender Identity Disorder (GID) in *DSM-IV*. Until *DSM-5*, GID was revised into people with gender dysphoria, which refers to "the distress that may accompany the incongruence between one's experienced or expressed gender and one's assigned gender" (American Psychiatric Association, 2013, p.451). Through the development of the definition, the issues related to TGNC people have gradually been considered as issues related to sexual health instead of mental disorder in the contemporary perspective.

The culturally defined norm of the gender binary and the past long time pathologization of TGNC people may contribute to their experiences of unfair treatments, including gender-related discrimination, rejection, and victimization from others (Breslow et al., 2015; Carter et al., 2019; Peng et al., 2019). The TGNC people experience gender-related discrimination due to the unjustified distinctions on the basis of their gender identities, which leads to their marginalized and minority positions, and

deprives them of fair living conditions, job opportunities, education, and so forth (Breslow et al., 2015). The gender-related rejection includes their experienced rejection from others, such as the rejection from family members, partners, friends, and even in the employment, they may experience rejection because of their gender identity. In addition, the gender-related victimization is also commonly in this group of people such as physical assault, violence, and hate crime. These unfair treatments are the manifestations of the minority stressors reported by TGNC people in their lived experiences (Clements-Nolle et al., 2006; Fiani, 2015; Gamarel et al., 2014; Klemmer et al., 2018).

According to the critical review written by White Hughto et al. (2015), due to the social preference of the gender binary, high rates of rejection and discrimination in employment existed among TGNC individuals, which may lead to a series of subsequent economic and healthcare problems. A review of victimization towards the TGNC people in the United States indicated that up to 53% of the TGNC people had experienced physical assault due to their gender identities (Stotzer, 2009). Researchers pointed out a theory that the perpetrators might experience angry and anxiety towards gender non-conformity, which leads them to adopt violence against TGNC people to diminish and reject their negative feelings (Westbrook & Schilt, 2013). Besides, experiencing rejection from someone known is common among TGNC people, including their family, partners, and so forth (White Hughto et al., 2015; Gamarel et al., 2014). The rejection can express in some less overt ways, such as refusing to accept their gender non-conformity, refusing to give support related to their gender identity,

and even barring their access to the sex reassignment treatments (White Hughto et al., 2015).

Meyer (2003) proposed the minority stress theory to provide a theoretical lens for understanding the relations of gender-related discrimination, rejection, and victimization with mental health status among the lesbian, gay, and bisexual (LGB) populations. This theory has also been elaborated and adopted in exploring the issues among TGNC people (Bockting et al., 2013; Pitoňák, 2017). According to the minority stress theory, gender-based discrimination, rejection, and victimization are excess stressors that TGNC people are exposed to due to their social minority position (Meyer, 2003), which they need to make more efforts to adapt to the society and the stressors are likely to cause adverse effects on their mental health status.

Researchers have documented the high prevalence of adverse mental health outcomes, such as depression, anxiety, and suicidal ideation among TGNC people (White Hughto et al., 2015). Especially depression, a chronic mental health condition, has been reported by them as a severe health issue. According to the results of the previous studies, the prevalence of depression among TGNC individuals can be as high as 62%, which is much higher than the general public, whose prevalence of depression is 16.6% (Budge et al., 2013; Kessler et al., 2005). A review of fifteen studies targeting TGNC individuals demonstrated a higher level of depressive symptoms compared with peers, with one study indicating a 35% prevalence of depression and another reporting that 50.6% of the participants had showed depressive symptoms. Scandurra and colleagues (2018) assessed 149 Italian TGNC individuals, and over 60% of the

participants reported their depression level in the clinical range. Compared with the studies worldwide, there are much fewer studies targeting TGNC people in China, but the researchers also found the depressive symptoms were common among Chinese TGNC individuals. By examining 209 Chinese TGNC people, Yang and colleagues (2015) stated that 45.4% of them had suffered from depressive symptoms. Similar results were reported in the studies conducted in the largest city Shanghai, which indicated that the depression level of TGNC people was significantly higher compared with the general public (Zhao et al., 2018; Li et al., 2016).

Based on the minority stress theory (Meyer, 2003), the minority stressors of discrimination, rejection, and victimization will increase the level of depression in the TGNC population. When reviewing the literature related to the relations of gender-related discrimination, rejection, and victimization with depression among TGNC people, several studies confirmed that these gender-related stressors were associated with depression of TGNC people. Several studies in the United States and Europe have documented that the multiple perspectives of discrimination, rejection, and victimization experienced by TGNC people such as employment, healthcare services, and interpersonal relationships explained the variance of depression (Fredriksen-Goldsen et al., 2013; Gamarel et al., 2014; Jäggi et al., 2018; Nuttbrock et al., 2010; Scandurra et al., 2018). In Asia, Yi et al. (2018) conducted a study in Cambodia involving a large sample of 1375 transgender women indicating that 39.3% of the participants experienced sexually assaulted or abused, and the participants with depressive symptoms were more likely to report the experiences of gender-based

victimization such as having been physically abused (adjusted odds ratio=1.54, 95%CI=1.15-2.08).

Such research is still at the beginning stages in the Chinese context. Two related studies conducted in China were identified, and in the studies (Yang et al., 2016; Peng et al., 2019), in line with the results in the studies worldwide, up to 75% of the TGNC participants reported the experiences of gender-related discrimination and 92.8% of the TGNC participants reported the experiences of rejection and victimization. Nevertheless, few studies were found to report the relations of gender-related discrimination, rejection, and victimization with the depression level of Chinese TGNC individuals. Under a relatively unfavorable environment, the relations of these minority stressors with their depression status still remain unstudied, and their psychological needs also need to be further understood.

With the minority stress theory substantiating that TGNC people are at higher risks of depressive symptoms under the specific minority stressors, resilience is come up with in studies to explain the variance of the mental health status of TGNC people as a general psychological factor. It is common for researchers to define resilience as personal qualities to produce yearnings to get through the challenges of lives and positively adapt to society (Connor & Davidson, 2003; Richardson, 2011). In an unfavorable environment, researchers pointed out that the TGNC people's resilience also needed to be focused on in order to see the problems diminish from a positive perspective instead of only focusing on their unique minority stressors (Connor & Davidson, 2003; Richardson, 2011). Meyer (2015) also elaborated on the minority

stress theory by adding resilience in this theory as a potential moderator to moderate the relations of minority stressors and mental health status among TGNC people. He demonstrated an essential part of understanding resilience in the face of minority stress, since it was only meaningful in facing the adversity. In the minority stress model, a model of disease causality, resilience could help oneself recover from the negative outcomes by coping, bouncing back, stress resisting, self-righting, and so forth. In this way, it could alter the adverse influence of minority stress on mental health status, and TGNC individuals with a higher level of resilience might be more likely to buffer the impacts of minority stress such as stigma and prejudice on mental health outcomes.

The previous studies achieved some inconsistent results about the moderating role of resilience in the TGNC population. In a research of 143 TGNC adults in Swiss (Jäggi et al., 2018), the moderating role of resilience was not found in the relations of the minority stressors, including gender-related discrimination, rejection, and victimization with their depression ( $\beta=0.54$ ,  $p>0.05$ ). Breslow et al. (2015) also indicated that resilience was not found to moderate the relations between discrimination and psychological distress among TGNC people ( $\beta=-0.03$ ,  $p>0.05$ ). Researchers explained that resilience might not be strong enough to buffer the adverse effects of these minority stressors on their depressive symptoms. However, Scandurra et al. (2017) drew an opposite conclusion that they found the moderating role of resilience in the relations between everyday discrimination and depressive symptoms by assessing 149 Italian TGNC individuals. Scandurra and colleagues (2017) demonstrated that resilience could help individuals adapt to the risk factors and "bounce back" in their lives. So with a



higher level of resilience, TGNC people were able to improve their social adaptation and exert their inner resources in the face of unfair treatments.

Currently, the studies in the context of mainland China only focused on specific aspects of these unfair treatments such as school bullying and discrimination from friends, and the relations of gender-related discrimination, rejection, and victimization with depression among TGNC people still remained unstudied. In China, the only legal way for the Chinese TGNC people to change their gender identification was to conduct the transition surgery, however, since there were only a handful of psychiatric hospitals and doctors could provide diagnosis and treatments for TGNC people, it was difficult for them to obtain a professional intervention, no matter it was a psychological, medical, or surgical intervention. Although in 2018, Beijing United Nations Development Program and China Women's College released the *Legal Recognition of Gender Identity of Transgender People-Evaluation Report on Relevant Chinese Laws and Policies*, focusing on the legal recognition and legal protection of the TGNC people, but the public still lacked an understanding related to this group of people, and Chinese TGNC people might face a series of unfair treatments in a relatively unfavorable environment. Above all, the present study aimed to examine the relations of gender-related discrimination, rejection, and victimization with depression among TGNC people with considering their resilience as a potential moderator in the Chinese context. The conceptual framework was depicted in Figure 1. According to the research aim, this study had some hypotheses:

1. Based on the minority stress theory (Meyer, 2003), this study hypothesized that all the minority stressors of gender-related discrimination, rejection, and victimization were positively associated with depression of TGNC people.

2. According to the definition and previous studies of resilience (Richardson, 2011; Scandurra et al., 2017), this study hypothesized that the resilience of TGNC participants was negative associated with their depression level.

3. Building on the elaboration of the minority stress theory (Hatzenbuehler, 2009; Meyer, 2015) and the results of previous studies (Scandurra et al., 2017; Scandurra et al., 2018), this study hypothesized that resilience would be a buffer in the deleterious relations of gender-related discrimination, rejection, and victimization with depressive symptoms.

## **2. Methods**

### **2.1 Participants and procedure**

This study collected participants by conducting online outreach through the online community of Chinese TGNC individuals. The community was the Psychological Team for Trans People, an online non-profit organization focusing on the psychological needs of the Chinese TGNC population, and it had TGNC followers all over China. The study was advertised as an online survey of gender-related discrimination, rejection, victimization, resilience, and depression among TGNC people through the platform of the community. When participants were voluntary to be involved in this study, they clicked the link of online recruitment, and they were directly sent to the online

questionnaire with the information sheet and inclusion criteria as the beginning page. Participants who met the inclusion criteria should be 18 or above 18 years old, and they identified themselves as TGNC individuals. After knowing about the research contents, participants who confirmed that they met the criteria should confirm the informed consent as well, and then they were able to respond to the items. Each participant could get a subsidy of 10 RMB after completing the online survey. This research project was approved by the Human Subjects Ethics Sub-committee of The Hong Kong Polytechnic University.

## **2.2 Measures**

**Demographic information.** In the beginning, the participants were required to provide their demographic information, including their age, sex assigned-at-birth, gender identity, income, and education.

**Gender-related discrimination.** This study used the subscales of Gender-related Discrimination in the scale of the Gender Minority Stress and Resilience Measure (GMSRM; Testa et al., 2015) to measure the discrimination experiences among TGNC individuals. There were a total of five items, and they were all self-reported (e.g., *Because of my gender identity or expression, I have had difficulty finding a bathroom to use when I am out in public*). Each item had four options: *Never*; *Yes, before age 18*; *Yes, after age 18*; and/or *Yes, in the past year*. When choosing any option including "yes", participants would get one point, and the total score was the sum of the 17 items. The scale had shown good reliability and validity among TGNC people (Testa et al., 2015). Since there was no Chinese version of the scales, this study conducted the back-

translation of the scales and translated the scales into Chinese for measuring the Chinese TGNC people. The results of the Cronbach's alpha for the scale of Gender-related Discrimination was 0.892, which showed good internal consistency.

**Gender-related rejection.** The subscale of Gender-related Rejection in the scale of GMSRM (Testa et al., 2015) was used to measure the rejection among TGNC people in this study. There were six self-rated items (e.g., *I have been rejected or distanced from friends because of my gender identity or expression*), and there were four possible responses for each item: *Never*; *Yes, before age 18*; *Yes, after age 18*; and/or *Yes, in the past year*. Participants would add one score when they chose any option containing "yes". The total score was the sum of the six items. This study conducted the back-translation process and used the Chinese back-translation version to be more appropriate for the participants. The Cronbach's alpha was 0.792 in the present study, and it showed good psychometric properties.

**Gender-related victimization.** This study used the subscale of Gender-related Victimization on the scale of GMSRM (Testa et al., 2015) to assess the victimization experiences among Chinese TGNC individuals. This scale included six items (e.g., *I have had my personal property damaged because of my gender identity or expression*) with four options for each item: *Never*; *Yes, before age 18*; *Yes, after age 18*; and/or *Yes, in the past year*. Participants added one point by choosing any option with "yes" and the sum of all the items was their total scores. This study also generated the Chinese back-translation version of the scale, and its Cronbach's alpha was 0.930 in the present study.

**Resilience.** This study used the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) to measure the level of resilience among TGNC people. There were 25 self-rated items (e.g., *I am able to adapt to change*) in this 5-point Likert scale. The options ranged from "strongly disagree" to "strongly agree" with scoring 0 to 4 accordingly. The total score was the sum of all items. When getting a higher score, participants were thought to have a relatively high level of resilience. This scale was established by Connor and Davidson (2003), and participants were required to answer the items based on their experiences of the past month. The Cronbach's alpha of this scale was 0.961 in the present study.

**Depression.** In this study, the Symptom Checklist 90 (SCL-90) was adopted to measure the depression level of the TGNC individuals. SCL-90 was a self-rated scale, and it was commonly used for examining the mental health status in the clinic (Derogatis et al., 1973; Derogatis et al., 1976). There were 90 items in SCL-90 for measuring mental health status from multiple perspectives, including somatization (S), obsessive-compulsive (O), interpersonal sensitivity (I), depression (D), anxiety (A), hostility (H), phobic anxiety (PH), paranoid ideation (PA), and psychoticism (PS). This study used the subscale of depression (D), which included 13 of them to measure the depression level. The responses ranged from "not at all" to "extremely" on this 5-Likert scale. The Cronbach's alpha in the present study was 0.950.

### **2.3 Data analysis**

Descriptive analysis was used to summarize the demographic information of the participants and the general levels of their gender-related discrimination, rejection,

victimization, resilience, and depression. One-way analysis of variance (ANOVA) was used to analyze the group differences of resilience and depression based on their sex assigned-at-birth, gender identity, education, income, and their experiences of gender-related discrimination, rejection, and victimization.

After the preliminary analysis, this study used Pearson's correlation analysis and multiple linear regression to understand the relationships of gender-related discrimination, rejection, victimization, and resilience with depression. Besides, model 1 in the PROCESS SPSS macro was adopted to examine the potential moderating role of resilience in the relations of discrimination, rejection, and victimization with depression among TGNC people. The variables were mean-centered for reducing multicollinearity. The moderation analysis was conducted by adopting a bias-corrected bootstrapping with 5000 samples in 95% confidence intervals (CIs). The follow-up simple slope analysis would be conducted to see the nature of the interactions if a significant moderating role of resilience was found. This study used version 23.0 of IBM SPSS and its computational tool PROCESS to conduct the data analysis.

### **3. Results**

A total of 513 participants responded in this study. Among the 513 participants, 152 participants were excluded due to several reasons: not meeting the inclusion criteria (under 18 years old,  $n=8$ ; not identifying themselves as TGNC people,  $n=17$ ), not answering the questions of the informed consent correctly ( $n=4$ ), and not answering the questions for ensuring the quality of the questionnaire correctly (e.g., *for ensuring the*

*quality of the questionnaire, please select the option "A"; n=123).* There were 361 participants in the final sample.

### **3.1 Participant characteristics**

Among the final sample of the 361 TGNC individuals, their ages ranged from 18 to 52 years old, with an average age of  $25.13 \pm 4.83$  years old. For the sex assigned-at-birth, 257 participants (71.2%) were males, and 104 (28.8%) were females. They showed a variety of gender identities with 251 transwomen (male to female, MtF; 69.5%), 93 transmen (female to male, FtM; 25.8%), and 17 participants (4.7%) identified themselves as gender non-conforming individuals such as genderqueer, gender-fluid, agender, and so forth. Among the TGNC participants, 231 individuals (64.0%) reported a bachelor's degree, which the largest proportion of the education level. The second-largest proportion was 24.7% (89 participants), reporting an education level of high school or technical school. Most participants reported a relatively low level of monthly income (52.6% of the participants earned less than RMB 5,000). The details of the demographic information were shown in Table 1.

The average level of resilience (Mean=56.94, SD=19.50) among TGNC participants was significantly lower than the score of the Chinese normative samples (Mean=65.40, SD=13.90;  $t=-8.246$ ,  $p < 0.01$ ; Jing & Cheng, 2018). For the sex assigned-at-birth, the level of resilience among male participants was significantly higher than the female participants ( $t=1.979$ ,  $p=0.049$ ), but no significant differences were found among different kinds of gender identities. Participants who were above bachelor's degrees reported the highest level of resilience, while the participants who

were less than high school diplomas reported the lowest level of resilience ( $F=2.964$ ,  $p=0.032$ ). People who earned a monthly income of RMB10,000-20,000 were at the highest level of resilience, and both the participants who earned the most and those who earned the least had relatively lower levels of resilience ( $F=4.623$ ,  $p=0.003$ ).

In regard to the level of depression, the participants showed a significantly higher level of depression (Mean=2.21, SD=0.92) compared with the score of Chinese normative samples (Mean=1.50, SD=0.59;  $t=14.839$ ,  $p<0.01$ ; Jin, Wu, & Zhang, 1986). Participants who had high school or technical school diplomas showed the highest level of depression, and those who got bachelor's degrees reported the lowest level of depression ( $F=8.199$ ,  $p<0.01$ ). For the sex assigned-at-birth, gender identity, and income, participants did not show significant differences in depression levels among different groups.

High rates of gender-related discrimination, rejection, and victimization were reported by TGNC participants in this study (80.1%, 98.9%, and 77.0% accordingly). Participants who had experienced discrimination showed a significantly higher level of depression than those who never experienced discrimination ( $t=-6.284$ ,  $p<0.01$ ). Moreover, participants who had experienced victimization also demonstrated significantly a lower level of resilience ( $t=2.340$ ,  $p=0.021$ ) and a higher level of depression than those who never experienced victimization ( $t=-6.553$ ,  $p<0.01$ ).

### **3.2 The associations of discrimination, rejection, victimization, resilience with depression**



Pearson's correlation analysis was used to see the bivariate correlations between studied variables. According to Cohen's benchmarks, *Pear's*  $r=0.10$  was small correlations, *Pear's*  $r=0.30$  was medium correlations, and *Pear's*  $r=0.50$  was large correlations (Breslow et al., 2015). In this study, discrimination ( $r=0.359$ ,  $p<0.01$ ), rejection ( $r=0.332$ ,  $p<0.01$ ), and victimization ( $r=0.338$ ,  $p<0.01$ ) among TGNC participants were found to be positively correlated with depression in medium levels, while their resilience ( $r=-0.513$ ,  $p<0.01$ ) had a high negative correlation with their depression status. Besides, age ( $r=0.093$ ,  $p=0.039$ ) and education ( $r=-0.172$ ,  $p<0.01$ ) were small correlated with depression status. No significant correlations with depression were found in the demographic information of their sex assigned-at-birth, gender identity, and income. See details in Table 2.

This study used multiple linear regression to further explore the associations of gender-related discrimination, rejection, victimization, resilience with depression. The demographic information of age, sex assigned-at-birth, gender identity, education, and income were adopted as covariates in the regression analysis. According to the results, the studied variables accounted for 34.4% of the variance of depression among TGNC participants ( $R^2$  adjusted=0.344,  $F=21.674$ ,  $p<0.01$ ). Among the studied variables, discrimination ( $\beta=0.218$ ,  $p=0.007$ ) and resilience ( $\beta=-0.428$ ,  $p<0.01$ ) were found to significantly contribute to the variance of their depression status, while rejection and victimization were non-significant in this model. See details in Table 3.

### **3.3 The moderating roles of resilience**

After assessing the associations of gender-related discrimination, rejection, victimization, and resilience with depression, this study tested the moderating roles of resilience in the relationships of discrimination, rejection, and victimization with depression among TGNC participants. The resilience was found to play a moderating role in the association between discrimination and depression ( $\beta=-0.091, p=0.045$ ). In the associations of rejection ( $\beta=-0.071, p=0.122$ ) and victimization ( $\beta=-0.037, p=0.416$ ) with depression, the moderating roles of resilience were not found. See details in Table 4.

Also, this study conducted a simple slope analysis to understand the interaction between discrimination and resilience further. The relations of discrimination with depression were significant at low (1 standard deviation below the mean;  $\beta=0.363, p<0.01$ ), mean ( $\beta=0.277, p<0.01$ ), and high (1 standard deviation above the mean;  $\beta=0.192, p<0.01$ ) levels of resilience. As the level of resilience increased, the magnitudes of the slopes were decreasing, which showed that the resilience buffered the relations of discrimination with depression among the TGNC participants. The visualizing interactions of discrimination and resilience were depicted in Figure 2.

#### **4. Discussion**

This study adopted the minority stress theory to explore the relations of gender-related discrimination, rejection, and victimization with depression among TGNC people in the Chinese context. A growing number of studies have focused on the mental health issues of the TGNC population. However, little research is known in China, and this

study focused on their psychological needs in the Chinese context with not only examining these specific minority stressors but also assessing the buffer of their resilience to see the problem diminish from a positive perspective. The findings from this study indicated that the minority stress theory could be usefully applied to the Chinese TGNC people. This study also contributed to the existing literature for understanding how the minority stressors explained the variance of the mental health status of this population in a different cultural context.

In general, the average level of resilience among the Chinese TGNC participants was lower, and the average level of depression was relatively higher than the general public. In line with the results of previous studies (Hoy-Ellis & Fredriksen-Goldsen, 2017; Zhang et al., 2020), due to their gender identities and gender expressions, TGNC people might be poorly accepted, and the relatively unfavorable and stressful environment is detrimental to their mental health status (Nuttbrock et al., 2009). It should be noted that the TGNC people who reported the experiences of gender-related discrimination and victimization showed significantly higher levels of depression compared with those who never experienced these unfair treatments. The results were partially consistent with another study of Chinese transgender women (Yang et al., 2016), which showed that the experiences of minority stressors could negatively impact their mental health status. Participants who reported gender-related victimization experiences also showed a significantly lower level of resilience compared with those who never experienced such things. According to the resiliency model posited by Richardson (2011), resilience facilitated a person to optimize their life circumstances,

but resilience may also vary with different conditions, such as different social environments, genders, and contexts.

High rates of gender-discrimination, rejection, and victimization were reported by the Chinese TGNC participants in this study. Over 75% of the participants reported the experiences of gender-discrimination, rejection, and victimization during their lifetime, which was consistent with other similar studies (Clements-Nolle et al., 2006; Peng et al., 2019; Puckett et al., 2020). Researchers have examined multiple aspects of gender-related discrimination, rejection, and victimization, including their employment status, verbal and physical victimization, and so forth, which indicated that high rates of TGNC people had experienced such unfair treatments in different forms and cultures. The findings from this study were also consistent with the minority stress theory (Meyer, 2003). As a minority and stigmatized social category, the TGNC population was more likely to experience excess stress due to the minority stressors related to their gender identities or expressions. In the face of these specific stressors, TGNC individuals might need to make more efforts to adapt to society.

In support of the first hypothesis, the minority stressors of the gender-related discrimination, rejection, and victimization were positively associated with the depression level among TGNC people, which was largely consistent with the results of previous studies (Bockting et al., 2013; Gamarel et al., 2014; White Hughto et al., 2017). Specifically, all three stressors were in medium levels of correlations with the depression level, and this finding was partially in line with the results of small to medium levels of correlations in the prior research (Breslow et al., 2015). In a relatively

conservative value in China, the environment for the TGNC people can be hostile (Peng et al., 2019). The environment makes it more difficult for the general public to accept the TGNC people, and the TGNC people may also internalize the negative responses from others into the beliefs about themselves (Peng et al., 2019; Scandurra et al., 2018). Both the unfair treatments and the negative self-judgment are detrimental to their mental health status, so that it is not surprising for us to find the medium correlations of gender-related discrimination, rejection, and victimization with their depressive symptoms.

In the multiple linear regression model, only gender-related discrimination of the three minority stressors significantly contributed to the variance of depression among TGNC people. The results confirmed the minority stress theory's prediction that the excess stressor would lead them to be at higher risks of depressive symptoms (Meyer, 2003). Due to the preference of gender binary in the society, the gender-related discrimination can be structural since the gender identities and expressions of TGNC people are inconsistent with the cultural schema of the binary gender system, which leads this population to be seen as "others". The labeling process creates gender-related discrimination in multiple aspects, and the TGNC people may experience gender-related discrimination in the process of getting a matched identity document, accessing healthcare services, finding a living house, keeping their employment, finding a matched bathroom in public, and so forth (Testa et al., 2015). Before being translated into the interpersonal level of unfair treatments such as interpersonal rejection and victimization, TGNC people might be at higher risk of experiencing depressive

symptoms due to unfair treatment based on the non-normative symbol (White Hughto et al., 2015).

The resilience was highly negative associated with depression among TGNC people, consistent with the second hypothesis. Resilience was also found to contribute to the variance of the depression significantly. The results in this study were consistent with previous studies of TGNC people (Bariola et al., 2015; Scandurra et al., 2018; Singh et al., 2011). Besides, partially supporting the third hypothesis, the resilience buffered the deleterious relation of discrimination with depression among TGNC people. In contrast, no significant moderating roles of the resilience in the relations of rejection and victimization with their depressive symptoms were found in this study. Scandurra et al. (2017) also found similar results, while Breslow et al. (2015) pointed out that resilience was not sufficient enough for the TGNC people to struggle with the minority stressors in their study. For the results of this study, the resiliency model pointed out that people have resilient qualities in the face of disruptions (Richardson, 2011). When the TGNC people experience disruptions by gender-related discrimination, the resilience will help them reintegrate themselves and drive them to be in harmony with their inner resources (Richardson, 2011).

The limitations of this study should be acknowledged. This study is cross-sectional. We collected the data of the TGNC participants from a one-time point so that we tested the relations based on the theoretical hypotheses and could only draw the conclusion related to the correlations instead of causal relationships. In the future, researchers may consider conducting longitudinal studies to explore the causal effects among the study

variables. Besides, for online recruitment in this study, the Internet could have some advantages in collecting data of the marginalized and minority population, and we also screened data by following rigorous checks to guarantee the validity of the data. However, there were also some concerns related to the online survey. For example, it was difficult for us to make sure whether the participants were who they said they were, and this study limited the participation to the individuals who had access to the Internet. For the measurements, we used the self-reported scales in this study, and the TGNC participants were required to retrospect to the previous experiences of their gender-related discrimination, rejection, and victimization. Their answers based on subjective retrospection may not be accurate. Future studies may need to use multiple measurements or investigate these issues from multiple perspectives, such as the perspectives of their healthcare providers and family members.

Despite the limitations, this study also has some noteworthy implications. Based on the results of this study, we highlighted the relatively unfavorable environment for the TGNC people, and we contributed to the literature about the relations of their experienced unfair treatments with their depression status in the Chinese context. By assessing their experiences and their depressive symptoms, we can better understand their psychological needs and their lived status, providing some directions for developing psychological interventions accordingly. For example, according to the internal working model (Amodeo et al., 2015), high rates of gender-related discrimination, rejection, and victimization may endorse TGNC individuals into the negative beliefs about themselves. The interventions such as a cognitive behavioral

therapy can be developed by focusing on the negative beliefs of TGNC people related to themselves due to the negative responses from others. The family interventions should also be considered to improve the interactions of their family members, which can reduce the family rejection and victimization, and be beneficial for their mental health status as well. Besides, in China's relatively conservative culture, the education of knowledge related to TGNC people can help improve their living environment. Especially for the discrimination in the process of getting healthcare services, the educational programs and the specific training sessions should be developed so that the healthcare providers can better understand and respect gender diversity.

## **5. Conclusions**

This study sheds light on a relatively unfavorable environment for Chinese TGNC individuals. A large proportion of this population had reported their experiences of gender-related discrimination, rejection, and discrimination in their daily lives. These minority stressors were positively associated with their depression status, especially gender-related discrimination, it significantly contributed to the variance of depression. Notwithstanding the unfavorable environment, we found a buffering role of resilience among Chinese TGNC people, which could help them face adversity. Thus, further efforts may focus on eliminating gender-related discrimination, rejection, and victimization to improve the mental health status of TGNC individuals. Their resilience can also be facilitated to attenuate the negative impacts of these unfair treatments on



their depressive symptoms. The educational and intervention programs might be developed to improve their living environment accordingly.

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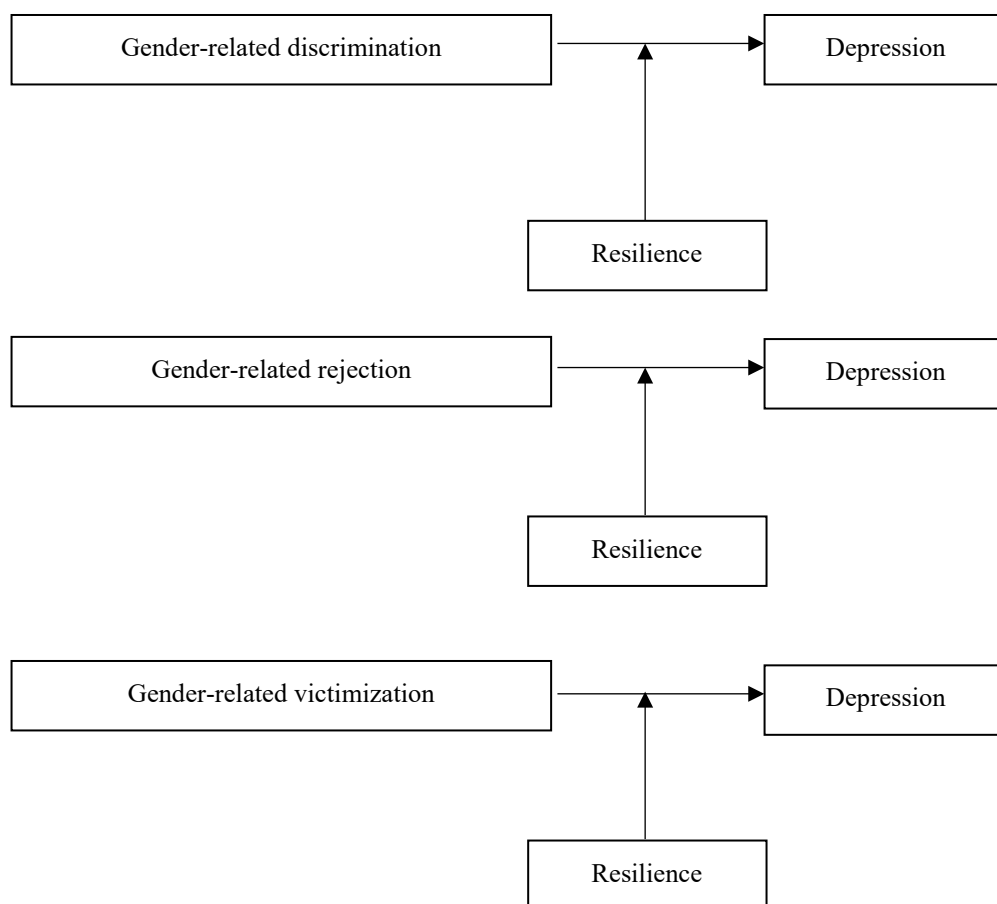


Figure 1 The conceptual framework of the study

Table 1 Participant characteristics

Characteristics		N(%) or M(SD)	Resilience		Depression	
			M(SD)	<i>t/F</i>	M(SD)	<i>t/F</i>
Sex assigned at birth	Male	257(71.2%)	58.23(18.94)	1.979*	2.17(0.84)	-1.183
	Female	104(28.8%)	53.76(20.55)		2.32(1.10)	
Gender identity	Transmen	93(25.8%)	54.28(21.48)	1.657	2.34(1.15)	1.120
	Transwomen	251(69.5%)	58.17(18.88)		2.17(0.84)	
Education	Gender non-conforming	17(4.7%)	53.35(15.93)		2.28(0.52)	
	Less than high school diploma	13(3.6%)	47.69(20.19)	2.964*	2.36(0.81)	8.199**
	High school or technical school diploma	89(24.7%)	53.49(22.22)		2.60(1.14)	
	Bachelor's degree	231(64.0%)	58.13(18.37)		2.06(0.78)	
Monthly income	Above bachelor's degree	28(7.8%)	62.39(16.78)		2.29(0.94)	
	<RMB5,000	189(52.6%)	53.59(19.61)	4.623**	2.32(0.99)	2.422
	RMB5,000-10,000	131(36.5%)	60.09(19.35)		2.06(0.81)	
	RMB10,000-20,000	35(9.7%)	63.80(17.59)		2.22(0.88)	
	>RMB20,000	4(1.1%)	52.50(7.77)		2.65(0.91)	
Discrimination	Never	72(19.9%)	60.67(20.64)	1.559	1.70(0.74)	-6.284**
	Yes	289(80.1%)	56.01(18.25)		2.35(0.92)	
Rejection	Never	4(1.1%)	70.75(22.41)	1.427	1.69(0.42)	-1.152
	Yes	357(98.9%)	56.78(19.44)		2.23(0.92)	
Victimization	Never	83(23.0%)	61.71(21.90)	2.340*	1.71(0.77)	-6.553**
	Yes	278(77.0%)	55.51(18.52)		2.37(0.91)	

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ . There were two cases with missing data in the responses of monthly income and experiences of rejection.

Table 2 Bivariate correlations of the studied variables

Variables	1	2	3	4	5	6	7	8	9
1. Depression									
2. Age	0.093*								
3. Sex assigned at birth	0.078	0.047							
4. Gender identity	-0.068	-0.084	-0.739**						
5. Education	-0.172**	0.036	0.019	0.124*					
6. Income	-0.082	0.232**	-0.123*	0.073	0.308**				
7. Discrimination	0.359**	0.143**	-0.272**	0.119*	-0.125**	0.111*			
8. Rejection	0.322**	0.191**	-0.245**	0.146**	-0.124**	0.078	0.810**		
9. Victimization	0.338**	0.187**	-0.318**	0.172**	-0.122*	0.074	0.798**	0.838**	
10. Resilience	-0.513**	-0.121*	-0.100*	0.059	0.163**	0.171**	-0.184**	-0.187**	-0.176**

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ .

Table 3 The relations of the gender-related discrimination, rejection, victimization, resilience with depression

Variables	<i>B(SE)</i>	<i>Block 1</i>				<i>B(SE)</i>	<i>Block 2</i>			
		$\beta$	<i>t</i>	<i>p</i>	<i>VIF</i>		$\beta$	<i>t</i>	<i>p</i>	<i>VIF</i>
Age	0.021(0.010)	0.109	2.015	0.045	1.069	-0.003(0.009)	-0.014	-0.309	0.757	1.141
Sex assigned at birth	0.199(0.162)	0.097	1.225	0.222	2.327	0.343(0.141)	0.168	2.427	0.016	2.595
Gender identity	0.068(0.146)	0.037	0.465	0.643	2.331	0.074(0.122)	0.040	0.606	0.545	2.387
Education	-0.242(0.081)	-0.168	-2.981	0.003	1.168	-0.098(0.068)	-0.068	-1.436	0.998	1.204
Income	-0.061(0.075)	-0.046	-0.808	0.419	0.203	0.000(0.063)	0.000	-0.002	0.152	1.250
Discrimination						0.100(0.037)	0.218	2.709	0.007	3.491
Rejection						-0.021(0.041)	-0.045	-0.515	0.607	4.196
Victimization						0.062(0.032)	0.168	1.930	0.054	4.084
Resilience						-0.020(0.002)	-0.428	-9.346	$p < 0.01$	1.137

Table 4 The moderating roles of resilience in the relations of discrimination, rejection, and victimization with depression

Variables	<i>B</i>	<i>SE</i>	$\beta$	95% <i>CI</i>	<i>t</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>df</i>
Discrimination	0.283	0.043	0.306	(0.198, 0.369)	6.515**	0.360	24.442**	(1, 347)
Resilience	-0.413	0.043	-0.449	(-0.497, -0.329)	-9.668**			
Discrimination × Resilience	-0.079	0.039	-0.091	(-0.156, -0.002)	-2.011*			

Rejection	0.238	0.044	0.258	(0.152, 0.324)	5.428**	0.334	21.762**	(1, 347)
Resilience	-0.426	0.044	-0.463	(-0.511, -0.340)	-9.735**			
Rejection× Resilience	-0.063	0.041	-0.071	(-0.143, 0.017)	-1.549			
Victimization	0.277	0.045	0.299	(0.189, 0.365)	6.204**	0.347	23.073**	(1, 347)
Resilience	-0.410	0.043	-0.446	(-0.494, -0.326)	-9.588**			
Victimization× Resilience	-0.033	0.041	-0.037	(-0.113, 0.047)	-0.815			

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ .

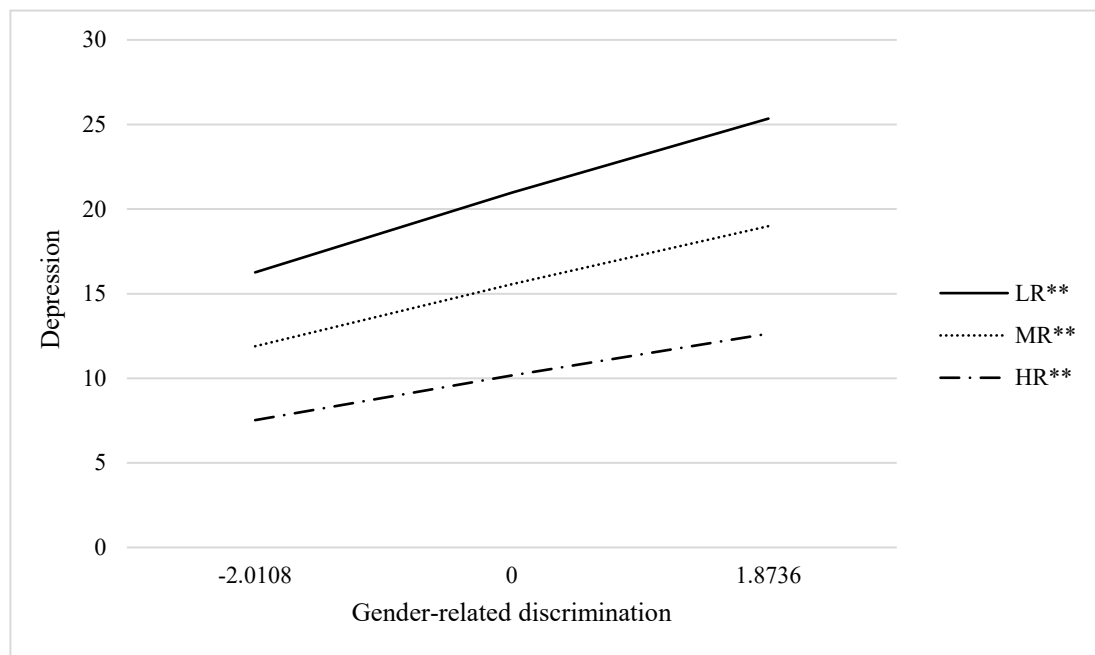


Figure 2 The relation of gender-related discrimination with depression at low (1 standard deviation below the mean), mean, and high (1 standard deviation above the mean) levels of resilience. LR is low level of resilience, MR is mean level of resilience, and HR is high level of resilience. \*\*  $p < 0.01$ .