

## **Mechanisms of discrimination experiences on behavioural performance and social competence in Bai adolescents: A focus on gender differences**

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### **ABSTRACT**

*Ethnic discrimination is often cited as a major risk factor affecting the development of ethnic minority adolescents. However, research on gender discrimination among ethnic-minority adolescents is limited, especially in China. Furthermore, the mechanisms by which experiences of discrimination affect development and whether these effects differ by gender remain unclear. Against this background, our study examined the effects of gender and ethnic discrimination on the behavioural and social competence of Bai adolescents in China, and whether these effects differ by gender. To address our research aims, we recruited 813 Bai adolescents (Mage = 13.87 years, 53% girls) in Yunnan Province, China, using multistage random cluster sampling and analysed the data using structural equation modelling. Results indicated that gender discrimination had a significant direct effect on behavioural performance and social competence, as well as an indirect effect on these outcomes through self-esteem. Notably, the effect of gender discrimination on social competence was only significant for boys. These findings highlight the impact of experiences of discrimination and gender differences, and provide practical insights for the development of social policies and social work programmes aimed at promoting the development of ethnic-minority adolescents.*

**Keywords:** Discrimination, Development, Self-esteem, Ethnic minorities, Gender

## **1. Introduction**

Discrimination refers to the unfair and biased treatment of an individual or a group based on certain identity markers—for instance, gender, age, disability, or religion (Dovidio et al., 2010; Rosette, Akinola, & Ma, 2018). In countries worldwide, common forms of discrimination arise from animosity towards individuals based on their gender or ethnicity (Bardol et al., 2020; Lee et al., 2019; Pearce et al., 2019). Numerous studies on discrimination experiences and individuals' development have documented discrimination's significant effects on poorer overall health, higher risk of depression and anxiety, increased delinquent behaviours, and weaker socioemotional and academic development (Benner & Kim, 2009; Chambers & Erausquin, 2018; de Freitas et al., 2018), and most research conducted among ethnic minorities has often focused on ethnic discrimination (Denise, 2012). However, emerging evidence suggests that gender is also crucial in the development of ethnic minorities, who may face distinct social treatments based on their gender and be affected by those experiences (Noguera, 2003). Nevertheless, relatively few studies have examined gender discrimination among ethnic minorities, to say nothing of ethnic-minority adolescents (Cogburn, Chavous, & Griffin, 2011; Sanders-Phillips et al., 2009).

China is a multi-ethnic country that incorporates 56 ethnic groups. Although there are 55 ethnic-minority groups in China, they form only 8.89% of the national population (National Bureau of Statistics, 2021). Generally speaking, those ethnic-minority groups have their own religions, modes of dress, and languages and experience communication and integration between local and other ethnic groups' cultures differently. Even though China has long been concerned with the unity and common prosperity of its population's ethnic-minority groups, ethnic-minority students in China still experience prejudice stemming from historical and geographic reasons, including the unconditional attribution of any poor academic performance and problems with adapting to their ethnic-minority status (Yao & Yang, 2017). However, there is a paucity of research on the relationship between discrimination experiences and the development of such adolescents in China (Zhao & Ngai, 2022).

Despite the substantial body of empirical research examining the effects of discrimination on the development of ethnic minorities, such research has predominantly focused on mental health outcomes like psychological distress and mental functioning (Hackett et al., 2020; Schmitt et al., 2014) but rarely addressed behavioural performance or social competence (Pettigrew et al., 2011; Tobler et al., 2013). As per Erikson's (1963) stages of psychosocial development, central developmental challenges for adolescents include learning adult roles and responsibilities, mastering social skills for interpersonal relationships, and establishing a sense of identity (Arnett, 2013; Meeus, 2016). Successful completion of developmental tasks results in a healthy personality and development. Thus, behavioural performance and social competence are

important indicators for measuring adolescents' development. Regarding mechanisms of influence, the transactional model of stress and coping sheds light on self-esteem's potential role as a mediator in the association between discrimination and minority adolescents' development (Lazarus & Folkman, 1984). Per that model, when people perceive discrimination as a source of stress, they perceive that their self-image is at risk, which can have implications for their self-esteem and, in turn, directly impact their development. Whereas some studies have explored the mediating role of self-esteem in the association between ethnic discrimination and mental health (Brody, Kogan, & Chen, 2012), research on other outcomes, including behavioural performance and social competence, has been rare. Beyond that, few studies have investigated the mechanism by which gender discrimination affects ethnic-minority adolescents' development, especially in China.

Overall, given the important role of gender in the development of ethnic minorities, more attention should be paid to gender discrimination among ethnic minorities. Although previous research has consistently demonstrated an association between discrimination experiences and development, systematic investigation into the underlying pathways of these effects is lacking, especially concerning gender discrimination and the development of ethnic-minority adolescents. Therefore, we aimed to address those gaps by examining the direct and indirect effects of gender and ethnic discrimination on behavioural performance and social competence in China, along with the mediating mechanism of self-esteem and gender-based differences.

### **1.1. Discrimination Experiences and Development**

According to the integrative model for minority child development (Coll et al., 1996), an individual's lower social position (e.g. in terms of race or gender) leads to experiences of discrimination that can hinder healthy development. Empirical studies have demonstrated that ethnic discrimination is associated with risky behaviours, such as substance use (Benner et al., 2018; Umaña-Taylor, 2016), along with an increased risk of internalising symptoms (Budescu et al., 2023). Meanwhile, a longitudinal study among Latinx adolescents has also revealed that discrimination is linked to higher levels of anxiety, rule-breaking, and aggression later in life (Bennett et al., 2020). Notably, most research conducted among ethnic minority adolescents has evaluated ethnic discrimination (Pascoe & Smart Richman, 2009), and paid little attention to gender discrimination. Regarding gender discrimination, research has primarily focused on discrimination experiences among adults and found that such discrimination is significantly associated with an increased risk of alcohol abuse among women and drug abuse among men (Otiniano Verissimo et al., 2014). Unlike adults, children begin to develop an awareness of discrimination as early as age 5 (Spears Brown & Bigler, 2005). As they grow older, their understanding of discrimination becomes more complex, and by middle school, many report experiencing discrimination (Denise, 2012). More attention needs to be paid to the gender

discrimination experience among children and adolescents. From another angle, although many studies have examined the effects of discrimination experiences on mental health and behavioural development, relatively few have explored its impact on adolescents' social skills (Myrick & Martorell, 2011).

## **1.2. Self-esteem as a Mediator**

Evolutionary psychology theory defines self-esteem as an individual's psychological assessment of their value and acceptance by peers, family, and society at large (Harter, 2003; Tetzner, Becker, & Maaz, 2017). Numerous studies have indicated that self-esteem is a crucial determinant of developmental outcomes, such as anxiety, depression, and delinquency (Gauthier-Duchesne, Hébert, & Blais, 2021; Sowislo & Orth, 2013). Experiencing discrimination has also been assumed to be a potential risk factor for reduced self-esteem (Huynh & Fuligni, 2010). Meanwhile, sociometer theory proposes that self-esteem is an interpersonal monitor of the degree to which one is accepted by other people. Negative experiences of social exclusion—for instance, discrimination experiences—may decrease an individual's self-esteem (Leary et al., 1995).

Both theoretical and empirical studies have revealed self-esteem to be a mechanism linking discrimination experiences and developmental outcomes. Per the transactional model of stress and coping (Lazarus & Folkman, 1984), when individuals perceive a negative event (e.g., discrimination) as stressful, they feel their self-image is threatened. This perceived threat may consequently diminish their self-esteem, thereby potentially hindering their development. Applying the theory, several studies have documented that self-esteem mediates the association between ethnic discrimination and individuals' development. For example, in a sample of 274 Latinx adolescents, Umaña-Taylor and Updegraff (2006) found that self-esteem mediated the association between ethnic discrimination and depression. Years later, Mereish et al. (2016) demonstrated how discrimination's indirect effect on depression through self-esteem is significant among African American men. Even so, most studies have examined self-esteem's mediating effect on the association between ethnic discrimination and mental health symptoms, whereas research investigating other health indicators (e.g. social competence) has been slim.

Although studies on the mediating effect of self-esteem in the association between gender discrimination and development among ethnic minorities have also been few, research conducted among other groups may offer evidence of its potential mediating role. Using the survey data of 277 women in Poland, Kucharska (2017) concluded that gender discrimination is positively associated with internalising disorders and that reduced self-esteem mediates that relationship. Thus, both theory and past studies provide a rationale for hypothesising that self-esteem mediates

the associations between discrimination experiences (i.e. gender discrimination and ethnic discrimination) and development (i.e. behavioural performance and social competence).

### **1.3. Gender Differences**

Differences in children's psychosocial development indicate that gender may moderate factors influencing adolescents' development (Erikson, 1968). Nevertheless, it remains uncertain whether gender differences impact the risk of experiencing discrimination and the adverse effects of such experiences.

Findings about gender variation in ethnic-minority adolescents' experiences with ethnic discrimination have been mixed. According to social dominance theory, racism is especially directed at boys, who are perceived as greater threats to dominant social order compared to girls. Per those findings, boys are more likely to experience ethnic discrimination than girls (Sidanius et al., 2004). Consistent with social dominance theory, empirical studies have also demonstrated that ethnic-minority boys are at a greater risk of experiencing ethnic discrimination than ethnic-minority girls are (Noguera, 2003; Pérez, Fortuna, & Alegria, 2008), partly due to the stereotype that boys are more aggressive (Greene, Way, & Pahl, 2006). However, another study found no gender-based differences in experiences with ethnic discrimination (Sellers et al., 2006). Regarding gender-based differences in ethnic-minority adolescents' experiences with gender discrimination, research has generally suggested that girls report higher levels of gender discrimination than boys do (Otiniano Verissimo et al., 2014; Schmitt et al., 2002), probably given their greater awareness of women's perceived lower social status which leading to greater sensitivity to gender-based discrimination (Brown, Bigler, & Chu, 2010).

Beyond gender-based differences in experiences with discrimination, discrimination's negative effects on adolescents' development also appears to vary by gender (Xie, Xu, & Gao, 2022). In theory, because girls' gender socialization often emphasizes the importance of approval and relationships, they may be more affected by negative experiences with valued others than boys (Ledwell & King, 2015), regardless of attributions to race or gender. Schmitt et al. (2002) observed that gender discrimination negatively impacts girls' well-being but do not significantly affect boys', because when members of a privileged group are rejected by the disadvantaged, it has fewer implications for the privileged group's value and status. Contrarily, expectation states theory (Correll & Ridgeway, 2006) posits that due to their higher status in the social hierarchy, boys and men generally expect better treatment and higher evaluations. From that perspective, boys' and men's perceived higher status and expectation of rewards may increase their vulnerability to the negative consequences of discrimination experiences.

In all, findings on gender-based differences in the risk of experiencing discrimination and the adverse effects of discrimination on adolescents' development have been inconsistent, which raises doubts about those relationships and calls for further exploration.

#### **1.4. The Present Study**

Although previous studies have provided important reference to the association between discrimination experiences and development, they have rarely focused on the gender discrimination experiences of ethnic minority adolescents. Moreover, mixed findings about gender-based differences in how often discrimination is experienced and the effect of discrimination on development call for further investigation. Beyond that, self-esteem's potential mediating role and gender's potential moderating role in the associations between discrimination experiences and development have yet to be examined within an integrated framework. Therefore, in our study, we examined the influencing mechanism of gender and ethnic discrimination on the development (i.e., behavioural performance, social competence) of ethnic-minority adolescents in China, specifically focusing on the mediation of self-esteem and the moderation of gender. Based on the above review, a conceptual framework (**Figure 1**) and the following hypotheses were developed:

H1.1: Gender discrimination is negatively related to adolescents' behavioural performance and social competence.

H1.2: Ethnic discrimination is negatively related to adolescents' behavioural performance and social competence.

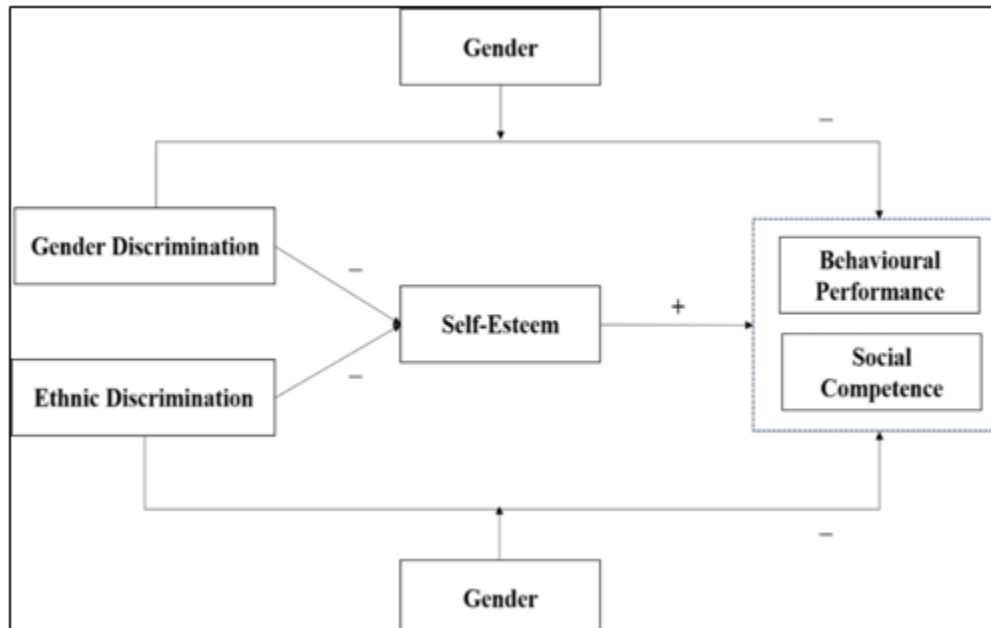
H2.1: Gender discrimination is negatively related to adolescents' self-esteem, which in turn positively influences their behavioural performance and social competence.

H2.2: Ethnic discrimination is negatively related to adolescents' self-esteem, which in turn positively influences their behavioural performance and social competence.

H3.1: Gender-based differences exist in the frequency of adolescents' gender and ethnic discrimination experiences.

H3.2: Gender-based differences exist in the associations between adolescents' gender and ethnic discrimination experiences and their behavioural performance and social competence.

**Figure 1. Conceptual framework**



## 2. Method

### 2.1. Participants

Using multi-stage cluster random sampling method, we collected data for our study in Yunnan Province, China, an area with a significant population of ethnic minorities (Yao & Yang, 2017). First, four districts were randomly selected. In each district, one middle school was randomly selected, and four classes from each grade in each school were randomly selected as well. All students in those classes were invited to participate in the survey. Participation in the survey was entirely voluntary, and informed consent was obtained from both the participants and their parents/guardians. Of the 813 Bai adolescents whom we recruited as participants, 47% were boys, and 53% were girls. The mean age of the participants was 13.87 years, and by type of school, 46.6% were studying in minority schools and 53.4% in ordinary schools. The study adhered strictly to the guidelines of the Declaration of Helsinki and received approval from the Research Ethics Committee of the author’s affiliated institution).

### 2.2. Measures

The Teacher/Classroom Discrimination Subscale (Cogburn, Chavous, & Griffin, 2011) and Global Discrimination Scale (Whitbeck et al., 2001) were modified to assess adolescents’ gender discrimination. A representative item of the scales is “Someone threatens to harm me physically because of my gender”. Participants answered five items using a 5-point Likert scale ranging

from 1 (never) to 5 (always). The mean value of the five items was calculated, with a high score indicating a high level of gender discrimination. Cronbach's  $\alpha$  for the scale in our study was 0.845.

Three items adapted from the Everyday Discrimination Scale, which is one of the most widely used measures for perceived ethnic discrimination and has been applied to ethnic minority adolescents (Clark, Coleman, & Novak, 2004; Kim, Sellbom, & Ford, 2014), were used to assess adolescents' ethnic discrimination (Williams et al., 1997). One example item is "I was treated with less respect than others because of my ethnicity". Participants indicated the frequency of their experiences of ethnic discrimination on a 5-point Likert scale from 1 (never) to 5 (always). The mean score was calculated and ranged from 1 to 5. In our study, the scale's Cronbach's alpha was 0.798.

Self-esteem was assessed using four items adapted from the Rosenberg Self-Esteem Scale (Rosenberg, 1965). One example item is "I am able to do things as well as most other people." In order to ensure consistency with other measures used in our study, the scale was modified to a 5-point scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The average score was used to assess self-esteem. Cronbach's  $\alpha$  for the scale was 0.801 in our sample.

Three items from the Behavioural Adjustment Scale were used to measure adolescents' behavioural performance (Ngai, Cheung, & Ngai, 2012). A representative item of the scale is "I took the initiative to do voluntary work". Each item was rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items were averaged to a mean value to represent behavioural performance. In our study, Cronbach's  $\alpha$  for the scale was 0.665.

Social competence was assessed using five items (e.g. "I understand the rules and expectations in interacting with others") from the Social Competence Subscale (Shek, Siu, & Tak Yan, 2007). Participants responded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items were averaged, with a higher score indicating a higher level of social competence. Cronbach's  $\alpha$  for the scale was 0.791 in our study.

Last, participants responded to items concerning the sociodemographic variables of gender (1 = boy, 0 = girl), age, type of school (1 = ethnic-minority school, 0 = ordinary school), and household socioeconomic status. Parental educational level (1 = illiterate, 6 = bachelor's degree or more) and parental employment status (1 = unemployed, 5 = senior manager) were used to assess household socioeconomic status (Shi & Shen, 2007).

### **2.3. Data analysis**

We utilized SPSS 25.0 to perform a descriptive analysis of the variables (i.e., gender discrimination, ethnic discrimination, self-esteem, behavioural performance, and social competence) and determine the correlations between them. Meanwhile, structural equation modelling (SEM) analyses were conducted using Amos 25.0. Several indices were employed to assess the goodness-of-fit of the model: chi-square statistics ( $\chi^2$ ), confirmatory factor analysis (CFI), and root mean square error of approximation (RMSEA). A CFI value exceeding .90 and an RMSEA below .08 indicate an acceptable fit (Hu & Bentler, 1999). For testing the mediation hypotheses, bias-corrected bootstrapping with 2,000 resamples and a 95% confidence interval (CI) was applied to confirm the indirect effect within the structural model (Preacher & Hayes, 2008). To determine the moderating role of gender, multi-group analysis in SEM was conducted by comparing the path coefficients between boys and girls. A significant chi-square difference ( $\Delta\chi^2$ ) suggested a significant between-group difference.

### 3. Results

#### 3.1. Descriptive Statistics and Correlations

**Table 1** presents the descriptive statistics and Pearson’s correlations between key variables. Gender discrimination was negatively associated with self-esteem ( $r = -0.193, p < 0.01$ ), behavioural performance ( $r = -0.205, p < 0.01$ ), and social competence ( $r = -0.237, p < 0.01$ ). Similarly, ethnic discrimination was negatively correlated with self-esteem ( $r = -0.144, p < 0.01$ ), behavioural performance ( $r = -0.155, p < 0.01$ ), and social competence ( $r = -0.193, p < 0.01$ ) as well. Self-esteem was positively related to behavioural performance ( $r = 0.201, p < 0.01$ ) and social competence ( $r = 0.365, p < 0.01$ ).

**Table 1: Descriptive statistics and correlations between key variables**

	Mean	SD	1	2	3	4	5
1.GD	1.419	0.675	1				
2.ED	1.217	0.480	0.548**	1			
3.SE	3.544	0.849	-0.193**	-0.144**	1		
4.BP	4.322	0.723	-0.205**	-0.155**	0.201**	1	
5.SC	4.016	0.736	-0.237**	-0.193**	0.365**	0.329**	1

Note GD: gender discrimination, ED: ethnic discrimination, SE: self-esteem, BP: behavioural performance, SC: social competence; \*\* $p < 0.01$ .

#### 3.2. Measurement Model and Structural Model

The test of the measurement model using confirmatory factor analysis revealed a good model fit ( $\chi^2 = 380.868, p < 0.001, CFI = 0.962, RMSEA = 0.041$ ). The structural model also showed an adequate model fit ( $\chi^2 = 547.164, p < 0.001, CFI = 0.947, RMSEA = 0.042$ ). As shown in **Table 2** and **Figure 2**, gender discrimination was significantly associated with adolescents’ behavioural

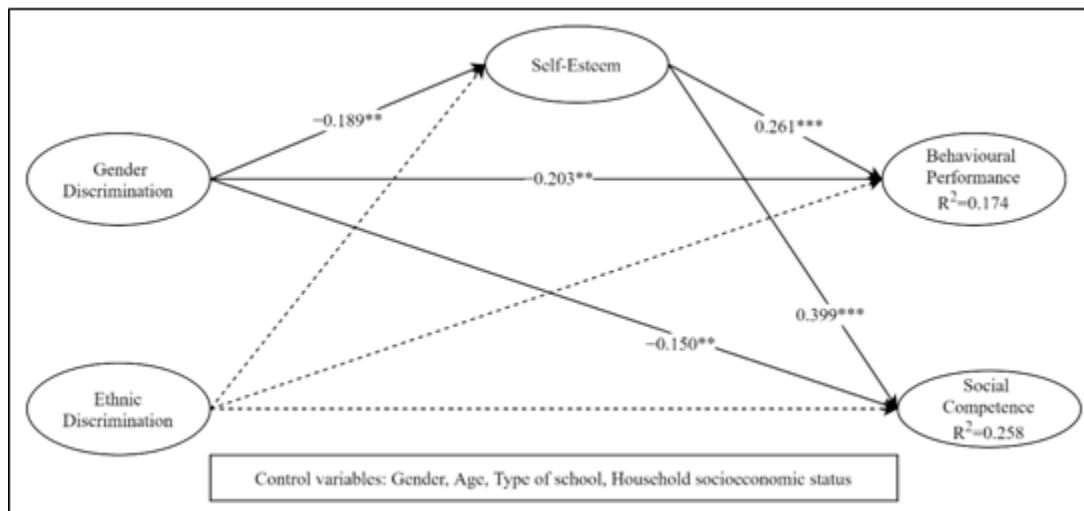
performance ( $\beta = -0.203, p < 0.01$ ) and social competence ( $\beta = -0.150, p < 0.01$ ), indicating that adolescents suffering from gender discrimination were more likely to have worse behavioural performance and social competence. In addition, gender discrimination was also correlated with self-esteem ( $\beta = -0.189, p < 0.01$ ), and self-esteem was associated with behavioural performance ( $\beta = 0.261, p < 0.001$ ) and social competence ( $\beta = 0.399, p < 0.001$ ). However, ethnic discrimination was not significantly associated with adolescents' self-esteem, behavioural performance or social competence.

**Table 2: Results of the structural model**

Model paths	B	$\beta$	SE	CR
Gender discrimination → Self-esteem	-0.264**	-0.189	0.082	-3.231
Gender discrimination → Behavioural performance	-0.215**	-0.203	0.066	-3.254
Gender discrimination → Social competence	-0.190**	-0.150	0.069	-2.750
Ethnic discrimination → Self-esteem	-0.123	-0.064	0.115	-1.076
Ethnic discrimination → Behavioural performance	-0.097	-0.066	0.091	-1.066
Ethnic discrimination → Social competence	-0.133	-0.075	0.097	-1.372
Self-esteem → Behavioural performance	0.198***	0.261	.038	5.160
Self-esteem → Social competence	0.363***	0.399	.042	8.669

Note B: unstandardised coefficient,  $\beta$ : standardised coefficient, SE: standard error, CR: critical ratio; SES: household socioeconomic status; \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ; Control variables: gender, age, type of school, and household socioeconomic status; For clear presentation, the associations between control variables with development variables (i.e., behavioural performance, social competence) are not shown in this table.

**Figure 2. Standardised structural model (full sample)**



Note \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

The results of the bootstrapping analyses supported the significant mediating role of self-esteem between gender discrimination and adolescents’ behavioural performance and social competence (Table 3). Significant indirect effects emerged between gender discrimination and adolescents’ behavioural performance ( $b = -0.052$ , 95% CI  $[-0.117, -0.012]$ ) and social competence through self-esteem ( $b = -0.096$ , 95% CI  $[-0.191, -0.018]$ ). Those results indicate that gender discrimination had a significant indirect effect on adolescents’ behavioural performance and social competence via self-esteem. However, the mediating effect of self-esteem between ethnic discrimination and adolescents’ behavioural performance and social competence was not observed. All variables in the model accounted for 17.4% of the explained variance in behavioural performance and 25.8% of the explained variance in social competence.

**Table 3: Bootstrap analysis of direct and indirect associations**

Model paths	B	SE	95% Confidence Interval	
			Lower	Upper
<b>Direct association</b>				
Gender discrimination → Behavioural performance	-0.215	0.084	-0.401	-0.072
Gender discrimination → Social competence	-0.190	0.083	-0.352	-0.014
Ethnic discrimination → Behavioural performance	-0.097	0.114	-0.321	0.138
Ethnic discrimination → Social competence	-0.133	0.107	-0.351	0.067
<b>Indirect association</b>				
Gender discrimination → Self-esteem → Behavioural performance	-0.052	0.026	-0.117	-0.012
Gender discrimination → Self-esteem → Social competence	-0.096	0.043	-0.191	-0.018
Ethnic discrimination → Self-esteem → Behavioural performance	-0.024	0.028	-0.089	0.024
Ethnic discrimination → Self-esteem → Social competence	-0.045	0.050	-0.151	0.048

Note B: unstandardised coefficient, SE: standard error.

### 3.3. Gender comparison

The between-group comparison using a t test showed that boys had a higher level of both gender discrimination ( $t = -2.256$ ,  $p < 0.05$ ) and ethnic discrimination ( $t = -2.522$ ,  $p < 0.05$ ). Chi-square tests were conducted to examine the measurement invariance; however, considering that chi-square differences are sensitive to sample size, fit index changes were also used to assess the equivalence of the measurements. Along those lines, a change-of-fit index less than 0.01 indicates that a measurement model is invariant (Mackerras, 2004). First, configural invariance was tested by equating the factorial structure between boys and girls. Results indicated that configural invariance held across gender. Next, metric invariance, which involves constraining

factorial weights, was tested, and multigroup analysis demonstrated acceptable results across gender ( $\Delta\chi^2 = 37.401$ ,  $p = 0.001$ ,  $\Delta CFI = 0.003$ ,  $\Delta RMSEA = 0.001$ ), indicating that the factor loadings were equivalent for the boy and girl groups. Last, scalar invariance was examined to pinpoint the equivalence of item intercepts across gender, and the results ( $\Delta\chi^2 = 90.892$ ,  $p < 0.001$ ,  $\Delta CFI = 0.009$ ,  $\Delta RMSEA = 0.001$ ) were satisfactory. In sum, gender showed configural, metric, and scalar invariance.

Multigroup analysis in SEM was performed in order to compare the associations between gender and ethnic discrimination, and adolescents' behavioural performance and social competence by gender. The results of the test of the gender-based differences appear in **Table 4**. A chi-square difference test comparing unconstrained and all-paths-constrained models was significant ( $\Delta \chi^2 = 9.914$ ,  $p < 0.05$ ). Further path-by-path tests, releasing one path at a time from the fully constrained model, identified significant gender-based differences in one path: from gender discrimination to social competence ( $\Delta \chi^2 = 6.113$ ,  $p < 0.05$ ).

**Table 4: Model tests by gender**

Model	$\chi^2$	df	CFI	RMSEA	$\Delta\chi^2$	$\Delta df$	$\Delta CFI$	$P\Delta\chi^2$
Unconstrained	798.509	418	0.937	0.034				
All paths constrained	808.423	422	0.936	0.034	9.914	4	0.001	0.042
GD→BP	798.652	419	0.937	0.033	0.143	1	<0.001	0.705
GD→SC	804.622	419	0.936	0.034	6.113	1	0.001	0.013
ED→BP	798.629	419	0.937	0.033	0.121	1	<0.001	0.728
ED→SC	798.635	419	0.937	0.033	0.126	1	<0.001	0.723

Note GD: gender discrimination, ED: ethnic discrimination, BP: behavioural performance, SC: social competence.

**Table 5** shows the results of the multi-group SEM. The results indicated that the association between gender discrimination and social competence was significant for boys ( $\beta = -0.277$ ,  $p < 0.001$ ) but not girls ( $\beta = -0.055$ ,  $p > 0.05$ ). For the boy subgroup, all variables in the model explained 14.8% of the variance in behavioural performance and 33.1% in social competence, whereas for the girl subgroup, the explained variance was 18.7% and 20.7%, respectively.

**Table 5: Results of the multi-group SEM by gender**

Model paths	Boys				Girls			
	B	$\beta$	SE	CR	B	$\beta$	SE	CR
GD → BP	-0.233***	-0.196	0.063	-3.723	-0.233***	-0.257	0.063	-3.723
GD → SC	-0.378***	-0.277	0.096	-3.921	-0.065	-0.055	0.075	-0.859
ED → BP	-0.094	-0.064	0.088	-1.069	-0.094	-0.066	0.088	-1.069
ED → SC	-0.093	-0.055	0.094	-0.983	-0.093	-0.050	0.094	-0.983

*Note B:* unstandardised coefficient,  $\beta$ : standardised coefficient, SE: standard error, CR: critical ratio; GD: gender discrimination, ED: ethnic discrimination, BP: behavioural performance, SC: social competence; \*\*\* $p < 0.001$ ; Control variables: age, type of school, and household socioeconomic status; For clarity of presentation, paths involving self-esteem and control variables are not displayed in this table.

## **4. Discussion**

This study explored the associations between gender and ethnic discrimination and Bai adolescents' development in China. The findings highlight the mediating role of self-esteem in the relationship between gender discrimination and adolescents' behavioural performance and social competence. Gender-based differences in those relationships are discussed in depth in what follows.

### **4.1. Discrimination Experiences and Development**

Our findings indicated that gender discrimination was directly related to Bai adolescents' behavioural performance and social competence. Those results align with past findings that experiences of gender discrimination can result in the development of maladaptive coping strategies involving problem behaviours (Ro & Choi, 2010), and may contribute to the formation of antisocial attitudes towards forming friendships (Andrews et al., 2018; Smart Richman & Leary, 2009). Contrary to our hypothesis, ethnic discrimination did not directly influence Bai adolescents' behavioural performance or social competence. That finding was inconsistent with literature reporting that a higher level of ethnic discrimination is associated with more behavioural problems (Marcelo & Yates, 2019) and more associations with deviant peers (Benner et al., 2018). Nevertheless, it also echoes several empirical findings (Tobler et al., 2013; Kwon, Metzger, & Kogan, 2022) showing no significant associations between ethnic discrimination and behavioural performance, including problems with conduct and substance use. In a systematic review, Cave et al. (2020) also found no significant associations between ethnic discrimination and behavioural problems among ethnic-minority children and adolescents in several studies. Those unexpected findings can be attributed to the successful execution of China's ethnic policy. Since the early 1950s, the Chinese government has formulated policies to promote ethnic equality, including various forms of preferential treatment towards minorities, and a system of regional ethnic autonomy (Hoshino, 2019). As a result, many minority students benefit from additional points on national college entrance examinations and preferential access to employment and political positions, while the system of regional ethnic autonomy affords them the right to establish autonomous governing bodies and preserve their languages, cultures, customs, and traditions (Mackerras, 2004; Sautman, 1998). Using data from China's 2005 mini-census, Wu and He (2018) found that, within the non-agricultural workforce, minorities are more likely than Han individuals to hold managerial or professional positions and to attain occupations with higher international socioeconomic index scores, suggesting that minorities have largely

benefited from the implementation of preferential policies. In general, China's ethnic policy makes ethnic-minority students feel valued by the state and strengthens their sense of ethnic identity (Tao & Xia, 2020). Some academic researchers and scholars have also expressed concern that preferential policies may result in the occurrence of "reverse discrimination" against the Han majority (Ma, 2007). In such social contexts, although ethnic-minority adolescents experience ethnic discrimination, it has few implications for their self-value and may not adversely affect their behavioural performance or social competence.

#### **4.2. Discrimination Experiences, Self-esteem, and Development**

Our findings confirm that self-esteem mediates the association between gender discrimination and Bai adolescents' behavioural performance and social competence. Experiencing gender discrimination is linked to lower self-esteem, which in turn predicts poorer adjustment in terms of behavioural performance and social competence. Congruent with sociometer theory (Leary et al., 1995), experiencing gender discrimination may decrease an individual's self-esteem, which is consequently related to inferior development. These results can also be interpreted by the transactional model of stress and coping (Lazarus & Folkman, 1984), which posits that perceiving discrimination as stressful threatens one's self-image, affecting their self-esteem (Kucharska, 2017; Kira et al., 2015) and subsequently influencing their adjustment, including antisocial behavior and social competence (An, Lee, & Chung, 2020; López & López, 2022). Nevertheless, contrary to our hypothesis, ethnic discrimination did not predict the self-esteem of Bai adolescents, and thus self-esteem did not serve as a mechanism through which ethnic discrimination related to adolescents' development. That finding runs counter to the literature, which demonstrates that adolescents experiencing ethnic discrimination have low self-esteem (Cénat et al., 2024), which leads to deviant behaviour and psychosocial problems (Mereish et al., 2016; Jia et al., 2020). One potential explanation for that discrepancy is that previous studies have typically examined only one type of discrimination (Bernard et al., 2022). In contrast, our study considered the effects of both gender and ethnic discrimination simultaneously, and revealed the distinct influence of discrimination experiences on adolescents' development.

#### **4.3. Gender comparison**

Consistent with social dominance theory (Sidanius et al., 2004), our study revealed that boys reported a higher prevalence of gender and ethnic discrimination compared to girls, probably because boys are more likely to be perceived as threats to dominant social hierarchies and thus more likely to experience higher levels of ethnic discrimination. As for gender-based differences in gender discrimination, however, that finding contradicts most research suggesting that girls face more gender discrimination than boys (Schmitt et al., 2002; Brown, Bigler, & Chu, 2010; Mitchell, Ybarra, & Korchmaros, 2014). However, it also coincided with the result of a study

conducted among African American adolescents in which boys reported more gender discrimination than girls (Cogburn, Chavous, & Griffin, 2011). On that count, our finding that boys exhibited a higher frequency of gender discrimination does not imply that girls are oblivious to those experiences but they may be more susceptible to experiencing less overt forms of discrimination, such as feelings of invisibility and negative nonverbal interactions (Chavous et al., 2008), which were not specifically addressed in our study.

Among other findings, gender discrimination significantly impacted boys' social competence but not girls', which contradicts previous research indicating that girls often emphasise the importance of relationships and appear to be more vulnerable to experiences of discrimination than boys (Ledwell & King, 2015). The result can be interpreted according to the expectation states theory (Correll & Ridgeway, 2006), which holds that boys' high expectation of being evaluated accordingly may make them vulnerable to the consequences of gender discrimination. Another possible explanation for the finding is that boys are more likely to respond aggressively to others who discriminate against them, which may lead to poor social interactions with others in general (Zhang, Li, & Ma, 2022).

## **5. Contributions and Implications**

Our findings have two theoretical implications. For one, given that gender discrimination has significant effects on adolescents' development, it is essential for researchers to investigate gender discrimination during adolescence. For another, theories in the literature, including the integrated model of ethnic-minority child development (Coll et al., 1996) and the transactional model of stress and coping (Lazarus & Folkman, 1984), primarily address how discrimination induced by minority status (e.g. race and/or gender) results in mental health problems in Western contexts. Our study is one of the first to apply those theories to ethnic-minority adolescents in China, providing empirical evidence for the application of those theories in Chinese social contexts.

Our results also have practical implications for promoting the development of ethnic-minority adolescents. Ethnic policies that emphasize equality among all ethnic groups in Yunnan Province have been demonstrated to be effective and should be sustained to prevent ethnic discrimination against any group. Meanwhile, given the adverse effects of gender discrimination on development, it is imperative to intensify efforts to enforce the state policy of gender equality in China (State Council Information Office of the PRC, 2014), especially among adolescents. Adolescence is a period in which identity normally becomes the focus of concern, and experiencing gender discrimination is not conducive for establishing a solid sense of identity, which is crucial for further development (Erikson, 1968). Moreover, it is advisable to develop intervention programmes that encourage intergroup contact to educate adolescents about

different gender groups, thereby fostering better intergroup relationships and reducing discrimination (Allport, 1954).

Based on our empirical results, self-esteem serves as a mediator in the association between discrimination experiences and development, which requires practitioners' continuous efforts in helping ethnic-minority adolescents to build a positive self-concept and improve their self-esteem. On that count, social workers could help ethnic-minority adolescents to enhance their self-esteem by highlighting the role of experiencing discrimination in the development of negative beliefs about oneself, identifying self-critical thinking, evaluating their strengths, and introducing self-compassion as an alternative response to discrimination (Craig et al., 2012; Langford et al., 2022).

Perhaps our most interesting finding was that boys reported more discrimination than girls, which may suggest a pressing need to focus on boys and men as victims of gender discrimination in social work intervention programmes. Gender discrimination is predominantly portrayed as a phenomenon involving offenders who are men and victims who are women (Spiegel, 2013); thus, attention has primarily fallen on women as victims, with men as victims marginalised in the picture. The greater recognition and understanding of the victimisation of boys and men, however, could prove valuable (Depraetere et al., 2020). At the same time, it calls for paying more attention to subtle and passive forms of discrimination (e.g. negative nonverbal interactions) against girls in the future (Cogburn, Chavous, & Griffin, 2011). In recent years, there has been a rightful emphasis on addressing overt manifestations of gender inequality in various health improvement programmes (Vigod & Rochon, 2020); however, subtle forms of discrimination, which are more pervasive, have received less focus and demand greater attention (Mendoza-Perez & Ortiz-Hernandez, 2021).

## **6. Limitations and Directions for Future Research**

Despite our study's mentioned contributions, several limitations remain noteworthy. First, our study followed a cross-sectional design, which allowed testing only associations between the core variables and not drawing any causal inferences. In response, research in the future should have a longitudinal design in order to determine the sequence and long-term effects of discrimination experiences on development among ethnic-minority adolescents. Second, our data primarily derived from adolescents' self-report, which may have entailed social desirability bias. Along those lines, future research should incorporate multiple data sources, including inputs from parents and teachers, to enhance the validity of the findings. Third, our sample consisted solely of Bai adolescents from Yunnan Province, which may limit the generalizability of our results to other ethnic groups or regions in China. Future studies should include participants from

a range of diverse cultural backgrounds and regions to enhance the generalizability of the findings.

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### **Author Contributions**

Conceptualization: Lifen Zhao; methodology: Lifen Zhao and Dandan Hu; formal analysis: Lifen Zhao and Dandan Hu; writing—original draft preparation: Lifen Zhao, Dandan Hu and Maoye Tian; writing—review and editing: Lifen Zhao; supervision, Lifen Zhao; funding acquisition: Lifen Zhao. All authors reviewed the results and approved the final version of the manuscript.

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