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Article

# Self-Expansion Motivation and Cross-Ethnic Intimate Contact Among Ethnic Minority Adolescents in China: A Moderated Chain Mediation Model

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## Abstract

Intimate intergroup contact is considered an optimal form of contact for reducing prejudice, yet less is known about how such relationships develop among ethnic minority adolescents in the Chinese cultural context. Using convenience sampling, data were collected from 668 Tibetan adolescents in Gansu, China. Guided by self-expansion theory and intergroup contact theory, this study examined the association between self-expansion motivation and cross-ethnic intimate contact, together with its mediating and moderating mechanisms. Self-expansion motivation, cross-ethnic friendship self-efficacy, and contact behavioral intention were positively correlated with cross-ethnic intimate contact. Cross-ethnic friendship self-efficacy and contact behavioral intention formed a significant chain mediating pathway. Gender moderated the association between self-expansion motivation and cross-ethnic friendship self-efficacy, and the indirect effects involving cross-ethnic friendship self-efficacy were stronger for boys than for girls. Self-expansion motivation may foster cross-ethnic intimate contact through cross-ethnic friendship self-efficacy and contact behavioral intention. Schools may promote such contact by integrating self-expansion-oriented activities into interethnic interaction and by providing targeted support to strengthen girls' cross-ethnic friendship self-efficacy.

**Keywords:** Tibetan adolescents; self-expansion motivation; cross-ethnic intimate contact; cross-ethnic friendship self-efficacy; contact behavioral intention

## 1. Introduction

Cross-ethnic intimate contact refers to close and meaningful interactions or relationships between members of different ethnic groups (Marinucci et al., 2021; Pettigrew & Tropp, 2006; Allport, 1954). Compared with more casual encounters, intimate contact may be especially important because it usually involves sustained, cooperative, and emotionally meaningful engagement, and therefore more closely reflects the conditions under which contact is most likely to improve intergroup relations (Pettigrew, 1998). Self-expansion motivation may be an important factor shaping cross-ethnic intimate contact (Kauff et al., 2021). As Wright et al. (2014) argued, outgroup members may provide novel experiences and perspectives that are less available within one's own group. For this reason, self-expansion motivation may encourage individuals to move beyond familiar social boundaries and build relationships with outgroup members.

Adolescence is a critical period for the formation of personal values as well as national and ethnic identities (Reimer et al., 2021). During this stage, young people gradually move beyond the family into broader school and social settings, where opportunities for cross-ethnic interaction increase. For Tibetan adolescents in China, school entry often marks a transition from predominantly Tibetan family environments to multiethnic settings in which they study, live, and interact with peers from other ethnic groups (Yuan et al., 2024). At the same time, socioeconomic development and policy

initiatives such as “Paired Aiding” have increased cross-regional educational and social exchanges in Tibetan regions, creating more opportunities for everyday intergroup contact among Tibetan adolescents (Wang, 2022). However, existing evidence on self-expansion motivation and cross-ethnic intimate contact has come largely from Western societies, and much less is known about whether this relationship also operates in ethnic minority contexts in China, particularly among Tibetan adolescents. Against this background, the present study examines how self-expansion motivation relates to cross-ethnic intimate contact and further tests its underlying mechanisms among Tibetan adolescents in Gansu Province, China. The findings may help clarify how cross-ethnic relationships develop in this context and inform efforts to promote high-quality interethnic interaction and harmony.

### 1.1. *Self-Expansion Motivation and Cross-Ethnic Intimate Contact*

Self-expansion motivation refers to individuals’ desire to acquire new perspectives, resources, and identities that broaden the self (Aron & Aron, 1986). According to the self-expansion model, individuals are intrinsically motivated to expand the self by incorporating the resources, perspectives, and identities of close others into their self-concept (Aron et al., 1992). Because outgroup members may offer forms of novelty that are less accessible within one’s ingroup, individuals may be especially inclined to develop relationships with them in pursuit of self-expansion (Wright et al., 2014).

Empirical evidence supports this account. In a Canadian study, individuals with higher self-expansion motivation experienced more positive emotions during interactions with outgroup members, which in turn predicted greater interactional intimacy (Dys-Steenbergen et al., 2016). Similarly, cross-cultural research conducted in Australia and Thailand found that college students’ self-expansion motivation was positively associated with their interest in outgroup members, perceived relationship quality, and contact frequency (Paolini et al., 2016). In the United States, higher self-expansion motivation has also been linked to the formation of intimate relationships among cross-ethnic couples (Caselli & Machia, 2022). However, most existing research on self-expansion motivation and cross-ethnic intimate contact has been conducted primarily in Western societies. Relatively little is known about whether and how self-expansion motivation shapes adolescents’ cross-ethnic intimate contact in the Chinese cultural context. China is a multiethnic country with 56 ethnic groups, and promoting interaction, exchange, and integration among ethnic groups has long been an important priority in ethnic affairs. At the Central Ethnic Work Conference held in August 2021, “promoting extensive interaction, comprehensive exchange, and deep integration among all ethnic groups” was identified as an important principle for strengthening and improving ethnic work. In 2026, the Fourth Session of the 14th National People’s Congress also passed the *Law on Promoting Ethnic Unity and Progress*. Against this backdrop, self-expansion motivation may play an important role in promoting Tibetan adolescents’ cross-ethnic intimate contact. Based on these considerations, this study proposes the following hypothesis:

**Hypothesis 1.** Tibetan adolescents’ self-expansion motivation positively predicts cross-ethnic intimate contact.

### 1.2. *The Mediating Role of Cross-Ethnic Friendship Self-Efficacy*

Cross-ethnic friendship self-efficacy refers to individuals’ confidence in their ability to successfully initiate and maintain friendships with members of other ethnic groups (Bagci et al., 2020). First, a core premise of the self-expansion model is that people enhance their potential self-efficacy by expanding the self to incorporate material and social resources, perspectives, and identities that facilitate goal attainment (Wright et al., 2014). Second, self-expansion motivation may prompt adolescents to engage more proactively in everyday cross-ethnic interactions, thereby increasing opportunities for mastery experiences; according to self-efficacy theory, mastery experiences are among the most important sources of self-efficacy (Bandura, 1982). Building on this reasoning, adolescents with higher self-expansion motivation are expected to report higher cross-

ethnic friendship self-efficacy. Empirical evidence also links cross-ethnic friendship self-efficacy to cross-ethnic intimate contact. Studies in the United Kingdom show that higher cross-ethnic friendship self-efficacy is associated with lower intergroup anxiety, which in turn predicts greater acceptance of outgroup members and higher-quality interethnic interactions (Birtel et al., 2024; Stevenson et al., 2021). Studies in Germany and Israel further suggest that immigrant adolescents with higher cross-ethnic friendship self-efficacy perceive greater social support and are better able to sustain friendships with native peers (Benbow et al., 2021; Titzmann et al., 2015). Similarly, research with Turkish adolescents indicates that those with higher cross-ethnic friendship self-efficacy are more willing to interact with outgroup members and are more likely to form friendships with immigrant peers (Bagci et al., 2023). Evidence from China points in the same direction: among Tibetan adolescents, cross-ethnic friendship self-efficacy has been shown to predict the quality of cross-ethnic contact (Liu et al., 2024). Taken together, these findings suggest that cross-ethnic friendship self-efficacy may function as a key mechanism linking self-expansion motivation to cross-ethnic intimate contact. Therefore, this study proposes:

**Hypothesis 2.** Tibetan adolescents' cross-ethnic friendship self-efficacy mediates the relationship between self-expansion motivation and cross-ethnic intimate contact.

### 1.3. *The Mediating Role of Contact Behavioral Intention*

Contact behavioral intention refers to an individual's inclination and psychological readiness to engage in cross-ethnic interactions (Husnu & Crisp, 2010; Ajzen, 1991). From a self-expansion perspective, outgroup members may offer social resources, unique perspectives, or identities that are less available within the ingroup (Wright et al., 2014). When this is the case, individuals high in self-expansion motivation may develop stronger contact behavioral intentions toward outgroup members as a way of expanding the self. Empirical research also supports this view, self-expansion motivation has been identified as an important predictor of intergroup contact (Kauff et al., 2021). A Canadian study categorized college students into high-versus low self-expansion motivation groups and assessed their contact behavioral intentions toward unfamiliar targets of different ethnic backgrounds. Students with higher self-expansion motivation reported significantly stronger contact behavioral intentions than those with lower motivation (Paolini et al., 2016).

The Theory of Planned Behavior (Ajzen, 1991) posits that behavioral intention is the most proximal determinant of behavior, directly shaping whether individuals enact a given action. Accordingly, adolescents who hold stronger behavioral intentions to engage in cross-ethnic contact should be more likely to initiate and sustain cross-ethnic interactions, thereby creating opportunities through which cross-ethnic relationships can develop. Consistent with this premise, research with adolescents shows that stronger contact behavioral intentions are associated with lower intergroup anxiety, more positive outgroup attitudes, and greater engagement in cross-ethnic interactions (Bagci et al., 2021). Nevertheless, empirical work simultaneously examining self-expansion motivation, contact behavioral intention, and cross-ethnic intimate contact remains limited, particularly in Chinese minority contexts. Therefore, the present study tests the mediating role of contact behavioral intention.

**Hypothesis 3.** Tibetan adolescents' contact behavioral intention mediates the relationship between self-expansion motivation and cross-ethnic intimate contact.

### 1.4. *Chain Mediation of Cross-Ethnic Friendship Self-Efficacy and Contact Behavioral Intention*

The Theory of Planned Behavior (TPB) posits that perceived behavioral control is a key antecedent of intention; self-efficacy is commonly treated as a central component of perceived behavioral control, capturing individuals' confidence in their capability to enact the focal behavior (Ajzen, 1991). Consistent with this framework, evidence across domains shows that higher self-efficacy is associated with stronger behavioral intentions, likely because individuals who feel capable

are more willing to translate goals into action (Liu, 2020; Morelli et al., 2023). In a Chinese study of cross-ethnic relations, Huang et al. (2019) found that university students with higher cross-ethnic friendship self-efficacy reported stronger intentions to engage in cross-ethnic contact and were more willing to form connections with members of other ethnic groups. Taken together, these findings suggest that cross-ethnic friendship self-efficacy may strengthen contact behavioral intention, which may in turn facilitate subsequent engagement in cross-ethnic interaction and the formation of closer cross-ethnic ties. Therefore, we propose:

**Hypothesis 4.** Tibetan adolescents' cross-ethnic friendship self-efficacy and contact behavioral intention jointly mediate the relationship between self-expansion motivation and cross-ethnic intimate contact.

### 1.5. *The Moderating Role of Gender*

Gender may moderate the association between self-expansion motivation and cross-ethnic friendship self-efficacy, but this possibility is better understood in relation to the historical and cultural legacy of Tibetan society than as a universal gender difference or a simple description of contemporary Tibetan life. Existing research suggests that gender relations in Tibetan communities cannot be reduced to a simple hierarchy of male superiority and female inferiority. Rather, they are more appropriately understood as historically shaped patterns of differentiated roles and participation (Li, 2013). In other words, the key issue is not that women lacked value, but that men and women were historically directed toward different social spaces, responsibilities, and forms of participation. For example, research on Jiarong Tibetans shows that local gender norms emphasize difference rather than opposition, and that women share substantial responsibilities and decision-making power in family and productive life, whereas men are more often engaged in outward-facing economic activities (Li, 2013). This relative agency within the household has long coexisted with more limited access to religious, educational, and public domains (Wang, 2011).

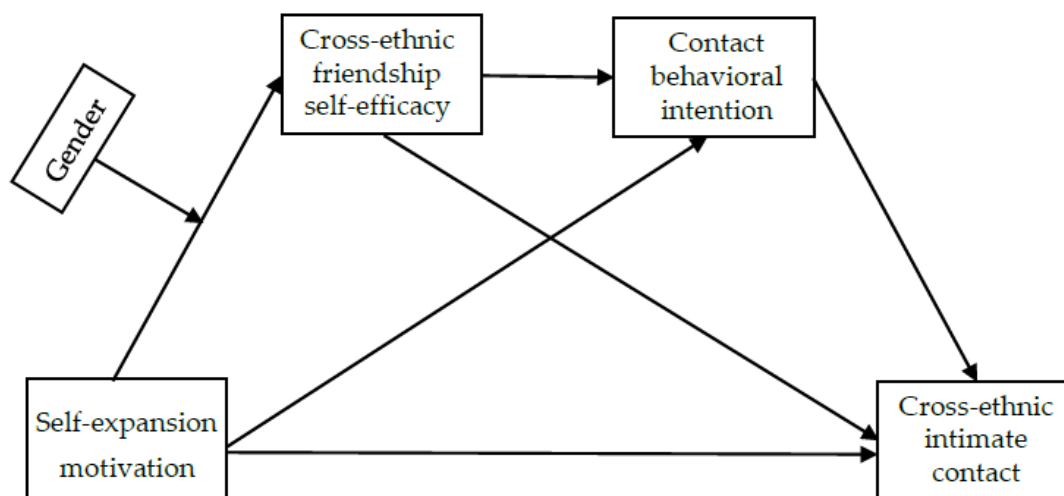
In traditional Gannan Tibetan society of China, the transmission of Tibetan Buddhist culture and monastery-based education was largely centered on men, whereas women's participation in religious life and formal education was more restricted (Li & Yang, 2005; Chen & Hu, 2006). Similar patterns have also been described in Amdo Tibetan areas of China (Zhu, 2020). Makley's ethnography of Labrang further shows that these gender arrangements were tied not only to labor division but also to religious space and community boundary-making: men were positioned closer to monastic careers, ritual authority, and public religious centers, whereas women were more often associated with household labor and supportive role around the monastery (Makley, 2003). Although these patterns should not be treated as fixed features of contemporary Tibetan society, they may still leave traces in adolescents' socialization and in the kinds of social participation that are more readily recognized and encouraged. Under such conditions, boys' behavior outside the family may be more likely to be recognized and encouraged when it aligns with traditional expectations of outward-facing participation. Boys may therefore have relatively more opportunities to accumulate successful experience and positive feedback in broader social interaction. Because self-efficacy is shaped in part by repeated practice, successful experiences, and social affirmation (Bandura, 1982), gender may influence the extent to which self-expansion motivation is translated into confidence in forming and maintaining cross-ethnic friendships. Therefore, we propose:

**Hypothesis 5.** Gender moderates the relationship between self-expansion motivation and cross-ethnic friendship self-efficacy.

### 1.6. *Overview of the Study*

This study examines how self-expansion motivation relates to cross-ethnic intimate contact among Chinese Tibetan adolescents. It further tests the chain mediating roles of cross-ethnic friendship self-efficacy and contact behavioral intention, as well as the moderating role of gender. By providing

evidence from the Chinese Tibetan context, this study contributes to understanding how cross-ethnic intimate contact develops among adolescents. The proposed model is shown in Figure 1.



**Figure 1.** The proposed model.

## 2. Methods

### 2.1. Participants

Using convenience sampling, we surveyed Tibetan adolescents from Gannan Tibetan Autonomous Prefecture in Gansu Province, China. A total of 750 paper-and-pencil questionnaires were administered on site. After excluding 82 incomplete responses, the final analytic sample comprised 668 adolescents aged 12–17 years ( $M = 14.24$ ,  $SD = 0.91$ ), including 412 girls (61.68%) and 256 boys (38.32%). Further demographic information is presented in Table 1.

**Table 1.** Sample Characteristics.

Variable		N	%
Gender	Male	256	38.32
	Female	412	61.68
Grade	Grade 7	243	36.38
	Grade 8	236	35.33
	Grade 9	189	28.29
Family residence	Tibetan residential area	447	66.92
	Multi-ethnic mixed residential area	221	33.08
Place of origin	Rural areas	506	75.75
	Cities or towns	162	24.25

### 2.2. Measures

All scales were translated from English into Chinese. An expert in psychological measurement then independently back-translated the instruments under blinded conditions and evaluated the translated versions to ensure linguistic accuracy and cultural appropriateness.

#### 2.2.1. Self-Expansion Motivation

The Self-Expansion Questionnaire: Broader Social Relationships Version (SEQ-BSRV), developed by Paolini et al. (2016), was utilized to measure self-expansion motivation. The scale consists of 12 items (e.g., “Having social relationships makes me learn new things”) and has

demonstrated good reliability in previous studies with adolescents. Responses were measured on a 7-point Likert scale (1 = “not at all” to 7 = “very much”), with higher scores indicating greater self-expansion motivation. A confirmatory factor analysis (CFA) was conducted, and four items (Item 7, Item 9, Item 10, Item 11) were removed due to factor loadings below 0.60. These items presented multiple interpretations in the Chinese cultural context, leading to potential biases in participants’ understanding of the scale’s core concepts. The CFA results indicated good structural validity ( $\chi^2 / df = 3.85$ ,  $CFI = 0.97$ ,  $TLI = 0.96$ ,  $RMSEA = 0.07$ ,  $SRMR = 0.03$ ). The scale showed strong internal consistency, with a Cronbach’s  $\alpha$  of 0.88 in the present study.

### 2.2.2. Cross-Ethnic Friendship Self-Efficacy

The Cross-Ethnic Friendship Self-Efficacy Scale, developed by Bagci et al. (2020), was employed in this study. The scale consists of eight items (e.g., “For me, making new friends from other ethnic groups is easy”) and has demonstrated reliability and validity in previous studies involving adolescents. Responses are measured on a 5-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), with higher scores indicating greater cross-ethnic friendship self-efficacy. The scale underwent confirmatory factor analysis, which led to the removal of two items (item 5 and item 8) due to factor loadings below 0.6. Item 5, which employs reverse coding, was excluded to avoid potential response biases, particularly among younger respondents. Item 8, which addresses personal privacy, was removed as sharing personal secrets is typically reserved for close family members in Chinese culture. The confirmatory factor analysis indicated that the scale exhibited good structural validity ( $\chi^2 / df = 4.62$ ,  $CFI = 0.95$ ,  $TLI = 0.92$ ,  $RMSEA = 0.07$ ,  $SRMR = 0.04$ ). In this study, the Cronbach’s  $\alpha$  coefficient for the scale was 0.72.

### 2.2.3. Contact Behavioral Intention

The Contact Behavioral Intention Scale was adapted from the Behavioral Intentions Scale developed by Crisp and Husnu (2011), based on Ratcliff et al. (1999). The scale consists of 10 items (e.g., “I think communication and interaction with classmates of other nationalities is very important”). Previous studies involving Chinese adolescents have demonstrated the scale’s reliability and validity. Responses are measured on a 9-point Likert scale, ranging from 1 (“totally disagree”) to 9 (“totally agree”), with higher scores indicating stronger contact behavioral intention. Confirmatory factor analysis led to the removal of three items (item 1, item 2, and item 10) due to factor loadings below 0.60. Items 1, 2, and 3 exhibited high semantic repetition in the Chinese context, making it sufficient to retain item 3, which most effectively expressed the construct of behavioral intention. Item 10, which involved tourism behavior and associated economic and time costs, was removed because it could confuse participants’ true behavioral intentions with perceptions of feasibility. After the removal of these items, the model fit was satisfactory ( $\chi^2 / df = 4.44$ ,  $CFI = 0.98$ ,  $TLI = 0.97$ ,  $RMSEA = 0.07$ ,  $SRMR = 0.03$ ). The Cronbach’s  $\alpha$  for the scale in this study was 0.88.

### 2.2.4. Cross-Ethnic Intimate Contact

The Inclusion of Other in the Self Scale (IOS), developed by Aron et al. (1992), was used to measure cross-ethnic intimate contact. The scale consists of a single item featuring seven pairs of circles that progressively overlap to varying degrees. Participants are instructed to select the pair of circles that best represents their relationship with their closest cross-ethnic friend. The IOS scale has shown adequate reliability and validity in prior studies involving Chinese adolescents. Some studies suggest that the IOS scale is suitable for measuring intimate interactions across different social groups and serves as a valid instrument for assessing relational closeness (Gaertner & Schopler, 1998). Aron et al. (1992) reported a test-retest reliability of 0.85 for the scale. Additionally, the scale has been utilized in several previous studies (Gino & Galinsky, 2012). Previous research also indicates that the use of a single-item scale does not compromise measurement reliability (Bergkvist, 2015; Böckenholt & Lehmann, 2015; Kamakura, 2015).

### 2.2.5. Control Variables

Parental cross-ethnic contact experience, place of origin, and family location were included as control variables.

### 2.3. Procedure

Data collection took place in June 2024 at a middle school in Gannan Tibetan Autonomous Prefecture. Prior to data collection, permission was obtained from the educational administrators of the participating school. The purpose and procedures of the study were then explained to the students, and assent from the students and informed consent from their parents or legal guardians were obtained before participation.

Students from the same class completed the questionnaire together in a classroom setting. The researcher read the instructions aloud and emphasized that participation was voluntary and anonymous, that the data would be used only for research purposes, that responses would be kept confidential, and that students should answer honestly based on their own thoughts and experiences. All questionnaires were written in Chinese. Although the students' home language was Tibetan, Chinese was the language of instruction at the school, and all students were proficient in Chinese. Paper questionnaires were then distributed and collected after completion. The entire procedure took approximately 20 minutes.

### 2.4. Data analyses

Data analyses proceeded in several steps. First, descriptive statistics, independent-samples *t* tests, and Pearson correlation analyses were conducted in SPSS 27.0. Second, Mplus 8.3 was used to test the chain mediation and moderated effects. Indirect effects were evaluated using bias-corrected bootstrap confidence intervals based on 5,000 resamples; an indirect effect was considered significant when the 95% confidence interval (CI) did not include zero (Erceg-Hurn & Mirosevich, 2008). Gender was dummy-coded (0 = female, 1 = male). All continuous variables were *z*-standardized prior to model estimation.

## 3. Results

### 3.1. Common Method Bias Test

To mitigate the potential for common method bias in the research data, procedures such as anonymization were implemented to manage the survey process. Harman's one-factor test showed that three factors had initial eigenvalues greater than 1 in the unrotated solution, with the first factor accounting for 35.27% of the variance. This figure falls below the critical threshold of 40%, indicating that the data are not significantly influenced by a serious issue of common method bias (Podsakoff et al., 2003).

### 3.2. Descriptive Statistics and Correlation Analysis

Descriptive statistics and Pearson's correlations are presented in Table 2. Mean scores on self-expansion motivation, cross-ethnic friendship self-efficacy, contact behavioral intention, and cross-ethnic intimate contact were all above the scale midpoints, suggesting moderate-to-high levels in this sample. Pearson's correlations showed that all four variables were significantly and positively interrelated ( $r_s = 0.28\text{--}0.56$ ,  $p_s < 0.001$ ).

**Table 2.** Descriptive statistics and correlations ( $N = 668$ ).

Variables	1	2	3	4
1. Self-expansion motivation	1			
2. Cross-ethnic intimate contact	0.28***	1		
3. Cross-ethnic friendship self-efficacy	0.56***	0.39***	1	

4. Contact behavioral intention	0.50**	0.45**	0.47**	1
M	5.43	4.02	3.59	5.50
SD	0.86	1.71	0.47	1.43
Range	2.75-7.00	1.00-7.00	2.33-5.00	1.43-9.00
Theoretical range	1-7	1-7	1-5	1-9
Skewness	-0.26	0.01	0.17	0.10
Kurtosis	-0.47	-1.02	0.46	-0.06

Note. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . The same as below.

### 3.3. Chain Mediation Model

A chain mediation model was estimated using observed-variable path analysis with maximum likelihood and 5,000 bias-corrected bootstrap resamples. Self-expansion motivation was specified as the predictor, cross-ethnic intimate contact as the outcome, and cross-ethnic friendship self-efficacy and contact behavioral intention as chain mediators. Individual cross-ethnic contact experience, parental cross-ethnic contact experience, place of origin, and family location were included as control variables. Because the model was just-identified ( $df = 0$ ), global fit indices were not informative; therefore, the interpretation focused on standardized estimates and bootstrapped CIs.

Self-expansion motivation was positively associated with cross-ethnic friendship self-efficacy ( $\beta = 0.54$ ,  $SE = 0.03$ ,  $p < 0.001$ ) and contact behavioral intention ( $\beta = 0.32$ ,  $SE = 0.04$ ,  $p < 0.001$ ). Cross-ethnic friendship self-efficacy also positively predicted contact behavioral intention ( $\beta = 0.27$ ,  $SE = 0.04$ ,  $p < 0.001$ ). Both cross-ethnic friendship self-efficacy ( $\beta = 0.22$ ,  $SE = 0.04$ ,  $p < 0.001$ ) and contact behavioral intention ( $\beta = 0.32$ ,  $SE = 0.04$ ,  $p < 0.001$ ) were significant predictors of cross-ethnic intimate contact, whereas the direct effect of self-expansion motivation on cross-ethnic intimate contact was not significant ( $\beta = -0.05$ ,  $SE = 0.04$ ,  $p = 0.24$ ).

The direct, indirect, and contrast effects are reported in Table 3. Bootstrap results showed a significant total indirect effect of self-expansion motivation on cross-ethnic intimate contact ( $\beta = 0.27$ ,  $SE = 0.03$ ,  $95\% CI = [0.21, 0.33]$ ). The indirect effects via cross-ethnic friendship self-efficacy alone ( $\beta = 0.12$ ,  $SE = 0.03$ ,  $95\% CI = [0.07, 0.17]$ ), via contact behavioral intention alone ( $\beta = 0.10$ ,  $SE = 0.02$ ,  $95\% CI = [0.07, 0.14]$ ), and via the chain pathway through both mediators ( $\beta = 0.05$ ,  $SE = 0.01$ ,  $95\% CI = [0.03, 0.07]$ ) were all significant, supporting the proposed chain mediation process. Post hoc contrasts were conducted to compare the magnitudes of the indirect effects. The indirect effects via cross-ethnic friendship self-efficacy and via contact behavioral intention did not differ significantly (Ind 1 vs. Ind 2:  $\beta = 0.02$ ,  $SE = 0.03$ ,  $95\% CI = [-0.05, 0.09]$ ). In contrast, both single-mediator indirect effects were significantly larger than the chain indirect effect (Ind 1 vs. Ind 3:  $\beta = 0.07$ ,  $SE = 0.03$ ,  $95\% CI = [0.02, 0.13]$ ; Ind 2 vs. Ind 3:  $\beta = 0.06$ ,  $SE = 0.02$ ,  $95\% CI = [0.02, 0.10]$ ).

**Table 3.** Bias-corrected bootstrap tests of mediating effects.

Paths	$\beta$	SE	95% CI		Percentage
			BootLLCI	BootULCI	
Total effect	0.22	0.04	0.15	0.30	
Total indirect effect	0.27	0.03	0.21	0.33	100%
Direct effect	-0.05	0.04	-0.14	0.04	
Ind 1: SEM→CEFSE→CEIC	0.12	0.03	0.07	0.17	44.44%
Ind 2: SEM→CBI→CEIC	0.10	0.02	0.07	0.14	37.04%
Ind 3: SEM→CEFSE→CBI→CEIC	0.05	0.01	0.03	0.07	18.52%
Ind 1 vs. Ind 2	0.02	0.03	-0.05	0.09	
Ind 1 vs. Ind 3	0.07	0.03	0.02	0.13	
Ind 2 vs. Ind 3	0.06	0.02	0.02	0.10	

Note. Standardized coefficients. SEM = Self-expansion motivation; CEFSE = Cross-ethnic friendship self-efficacy; CBI = Contact behavioral intention; CEIC = Cross-ethnic intimate contact. The same as below.

### 3.4. The Moderating Effect of Gender and Moderated Chain-Mediation Model

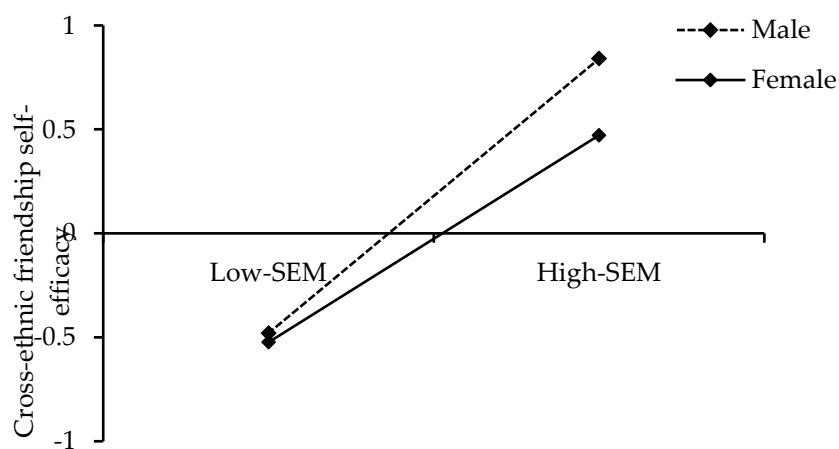
To examine whether the association between self-expansion motivation and cross-ethnic friendship self-efficacy varied by gender, gender (1 = male, 0 = female) was specified as a moderator of the path from self-expansion motivation to cross-ethnic friendship self-efficacy. Place of origin, family location, and parental cross-ethnic contact experience were included as covariates. All continuous variables were standardized prior to analysis, and bias-corrected bootstrap confidence intervals were estimated using 5,000 resamples. Model fit was acceptable ( $\chi^2/df = 4.67$ ,  $CFI = 0.98$ ,  $TLI = 0.89$ ,  $RMSEA = 0.07$ ,  $SRMR = 0.03$ ).

Table 4 presents the path coefficients for the moderating effect. Self-expansion motivation positively predicted cross-ethnic friendship self-efficacy ( $\beta = 0.50$ ,  $SE = 0.05$ ,  $p < 0.001$ ), and this association was significantly moderated by gender (interaction:  $\beta = 0.16$ ,  $SE = 0.07$ ,  $p = 0.03$ ). Simple-slope estimates indicated that self-expansion motivation was positively associated with cross-ethnic friendship self-efficacy among females ( $\beta = 0.50$ ,  $SE = 0.05$ ,  $p < 0.001$ ) and males ( $\beta = 0.67$ ,  $SE = 0.06$ ,  $p < 0.001$ ), with a stronger slope for males (see Figure 2). Cross-ethnic friendship self-efficacy, in turn, positively predicted contact behavioral intention ( $\beta = 0.27$ ,  $SE = 0.04$ ,  $p < 0.001$ ) and cross-ethnic intimate contact ( $\beta = 0.24$ ,  $SE = 0.04$ ,  $p < 0.001$ ). Contact behavioral intention also positively predicted cross-ethnic intimate contact ( $\beta = 0.33$ ,  $SE = 0.04$ ,  $p < 0.001$ ). After accounting for the mediators, the direct effect of self-expansion motivation on cross-ethnic intimate contact was not significant ( $\beta = -0.05$ ,  $SE = 0.04$ ,  $p = 0.26$ ).

**Table 4.** Moderating Effect Regression Analysis Result.

Outcome variables	Predictors	$\beta$	SE	z	95% CI		R <sup>2</sup>
					BootLLCI	BootULCI	
CEFSE	SEM	0.50	0.05	11.24	0.42	0.59	0.34
	Gender	0.22	0.07	3.31	0.09	0.35	
	SEM × Gender	0.16	0.07	2.20	0.01	0.31	
CBI	SEM	0.32	0.04	7.74	0.25	0.41	0.32
	CEFSE	0.27	0.04	6.61	0.19	0.35	
CEIC	CEFSE	0.24	0.04	5.59	0.16	0.33	0.27
	CBI	0.33	0.04	7.88	0.24	0.41	
	SEM	-0.05	0.04	-1.13	-0.14	0.04	

Note. Standardized coefficients. Confidence intervals are 95% bias-corrected bootstrap CIs. Coefficients are rounded to two decimals.



**Figure 2.** The moderated effect of gender on the relationship between SEM and CEFSE.

Bootstrap results (Table 5) showed that the conditional indirect effect of self-expansion motivation on cross-ethnic intimate contact via cross-ethnic friendship self-efficacy was stronger for

males ( $\beta = 0.16$ ,  $SE = 0.04$ ,  $95\% CI = [0.10, 0.24]$ ) than for females ( $\beta = 0.12$ ,  $SE = 0.02$ ,  $95\% CI = [0.08, 0.17]$ ), yielding a positive index of moderated mediation ( $\beta = 0.04$ ,  $SE = 0.02$ ,  $95\% CI = [0.01, 0.09]$ ). In addition, the chain indirect effect via cross-ethnic friendship self-efficacy and contact behavioral intention was also stronger for males ( $\beta = 0.06$ ,  $SE = 0.01$ ,  $95\% CI = [0.04, 0.09]$ ) than for females ( $\beta = 0.05$ ,  $SE = 0.01$ ,  $95\% CI = [0.03, 0.07]$ ), with a significant index of moderated chain mediation ( $\beta = 0.02$ ,  $SE = 0.01$ ,  $95\% CI = [0.002, 0.031]$ ). By contrast, the indirect effect via contact behavioral intention alone was significant but not conditional on gender ( $\beta = 0.11$ ,  $SE = 0.02$ ,  $95\% CI = [0.07, 0.15]$ ). Collectively, these findings indicate that gender amplifies the indirect association between self-expansion motivation and cross-ethnic intimate contact primarily by strengthening the pathway from self-expansion motivation to cross-ethnic friendship self-efficacy, resulting in both a moderated single-mediator pathway and a moderated chain-mediation pathway.

**Table 5.** Bootstrap results for the conditional indirect effects.

Paths	Moderator	$\beta$	SE	95% CI	
				BootLLCI	BootULCI
Ind 1: SEM $\rightarrow$ CEFSE $\rightarrow$ CEIC	Female	0.12	0.02	0.08	0.17
	Male	0.16	0.04	0.10	0.24
Index of moderated mediation (Indirect 1)	—	0.04	0.02	0.01	0.09
Ind 3: SEM $\rightarrow$ CEFSE $\rightarrow$ CBI $\rightarrow$ CEIC	Female	0.05	0.01	0.03	0.07
	Male	0.06	0.01	0.04	0.09
Index of moderated mediation (Indirect 3)	—	0.02	0.01	0.002	0.031
Total effect (conditional)	Female	0.22	0.04	0.15	0.3
	Male	0.28	0.04	0.19	0.36
Ind 2: SEM $\rightarrow$ CBI $\rightarrow$ CEIC		0.11	0.02	0.07	0.15

*Note.* Standardized coefficients. Confidence intervals are 95% bias-corrected bootstrap CIs. Coefficients are rounded to two decimals; CI bounds are reported to three decimals when rounding to two decimals would obscure whether the interval includes zero.

## 4. Discussion

This study examined the relationship between self-expansion motivation and cross-ethnic intimate contact among Chinese Tibetan adolescents. It explored the chain-mediated roles of cross-ethnic friendship self-efficacy and contact behavioral intention, as well as the moderating role of gender. The findings contribute to a deeper understanding of Tibetan adolescents' cross-ethnic contact characteristics and provide insights into strategies for promoting cross-ethnic intimate contact.

### 4.1. The Influence of Self-Expansion Motivation on Cross-Ethnic Intimate Contact

The findings showed that self-expansion motivation was positively associated with cross-ethnic intimate contact among Tibetan adolescents. In other words, adolescents with stronger self-expansion motivation were more likely to develop closer cross-ethnic relationships. This finding supports Hypothesis 1 and is consistent with previous research (Muisse et al., 2019; Wright et al., 2014). According to self-expansion theory, individuals with stronger self-expansion motivation are more likely to seek and maintain relationships that allow them to incorporate others' resources, perspectives, and identities into the self (Aron & Aron, 1986). For Tibetan adolescents with strong self-expansion motivation, ethnic and cultural differences may be experienced not as barriers but as sources of novelty and growth, which in turn encourage cross-ethnic contact (Wright et al., 2014). In addition, adolescents with higher self-expansion motivation may show greater openness to other ethnic cultures, making it easier for them to extend their social networks across ethnic boundaries (Naeimi et al., 2024; West et al., 2024). In recent years, the Chinese government has introduced several action plans for inter-ethnic interaction, including the "Plan to Promote Inter-Ethnic Communication,

Exchange, and Integration through Tourism,” the “Mutually Embedded Development Plan for All Ethnic Groups,” the “Paired Assistance Program for Tibetan Regions,” and the “Ethnic Cultural Initiative to Enhance Inter-Ethnic Interaction and Exchange,” which fosters the development of inter-ethnic intimacy among Tibetan youth.

#### 4.2. *The Mediating Role of Cross-Ethnic Friendship Self-Efficacy*

The present study found that cross-ethnic friendship self-efficacy mediated the relationship between self-expansion motivation and cross-ethnic intimate contact among Tibetan adolescents, supporting Hypothesis 2. This finding is consistent with previous research and further highlights the important roles of self-expansion motivation and cross-ethnic friendship self-efficacy in cross-ethnic interaction (Tantawy et al., 2021). The self-expansion theory proposes that people have a fundamental desire to expand the self, that is, to increase their perspectives, competence, resources and self-efficacy (Aron et al., 2022). Adolescents with stronger self-expansion motivation may be more likely to view cross-ethnic interaction as an opportunity for self-expansion and, in turn, develop greater confidence in their ability to initiate and maintain cross-ethnic friendships. Empirical research has also shown that self-expansion is associated with stronger feelings of self-efficacy in close relationships (Mattingly & Lewandowski, 2013). Social cognitive theory also helps explain this mediating process. Self-efficacy beliefs influence not only whether individuals initiate particular behaviors, but also how much effort they invest and how long they persist when facing obstacles (Bandura, 1982). For Tibetan adolescents, cross-ethnic friendship self-efficacy may be especially important because cross-ethnic interactions often involve cultural differences, potential language barriers, and social uncertainty. Those with lower cross-ethnic friendship self-efficacy may lose confidence or withdraw their efforts when they encounter difficulties. By contrast, Tibetan adolescents with higher cross-ethnic friendship self-efficacy may respond more positively to challenges in cross-ethnic interaction, making it easier for them to cope with difficulties and reduce the negative impact of adverse experiences (Bagci et al., 2020; Paolini et al., 2024). Accordingly, self-expansion motivation may promote cross-ethnic intimate contact partly by strengthening Tibetan adolescents’ cross-ethnic friendship self-efficacy, which in turn supports the development of cross-ethnic relationships.

#### 4.3. *The Mediating Role of Contact Behavioral Intention*

The study identified the mediating role of contact behavioral intention between self-expansion motivation and cross-ethnic intimate contact, thereby validating Hypothesis 3. According to self-expansion theory, individuals with higher self-expansion motivation are more likely to seek out stimulating novel experiences (Aron & Aron, 1986). In other words, those with stronger self-expansion motivation are more inclined to initiate contact with others when encountering new situations or individuals from different backgrounds. For Tibetan adolescents with high self-expansion motivation, the ethnic and cultural differences they encounter can make cross-ethnic contact more appealing, thereby strengthening their intentions to engage with others (Wright et al., 2014). This enhanced contact behavioral intention helps to deepen relationships. Additionally, strong contact behavioral intentions reduce intergroup anxiety and alleviate psychological stress in cross-ethnic interactions, thus fostering greater interest in these contacts (Stern & West, 2014). Therefore, Tibetan adolescents’ self-expansion motivation fosters cross-ethnic intimacy by driving their contact behavioral intention. Ethnic and cultural differences attract adolescents to engage in interactions, while contact behavioral intentions help alleviate intergroup anxiety, collectively promoting cross-ethnic friendships.

#### 4.4. *The Chain Mediating Role of Cross-Ethnic Friendship Self-Efficacy and Contact Behavioral Intention*

An important finding of the present study is that cross-ethnic friendship self-efficacy and contact behavioral intention jointly mediated the relationship between self-expansion motivation and cross-

ethnic intimate contact, supporting Hypothesis 4. First, self-expansion theory suggests that one important purpose of self-expansion is to increase individuals' potential efficacy by acquiring new resources, perspectives, and identities (Aron & Aron, 1986). In the context of cross-ethnic interaction, adolescents with stronger self-expansion motivation may therefore be more likely to view such interaction as an opportunity to enhance their capabilities, and thus develop stronger cross-ethnic friendship self-efficacy. Second, there is both theoretical and empirical support for the link between cross-ethnic friendship self-efficacy and contact behavioral intention. The Theory of Planned Behavior proposes that self-efficacy, as an important internal control belief within perceived behavioral control, directly influences behavioral intention (Ajzen, 1991). Empirical studies have also shown that self-efficacy can significantly predict general behavioral intention, such as dropout intention and competition intention (Liu, 2020; Morelli et al., 2023; Mazanov & Byrne, 2007). Research among Uyghur, Han, and Hui participants in China similarly found that higher cross-ethnic friendship self-efficacy was associated with stronger contact behavioral intention (Huang et al., 2019). Finally, stronger contact behavioral intention provides a more direct impetus for the development of cross-ethnic intimate relationships. Stronger contact behavioral intention may also enhance interest in intergroup contact, reduce interpersonal distance, and alleviate anxiety and stress during the contact process (Stern & West, 2014). In this way, it may help move adolescents from possible contact to active contact, and from general interaction to more sustained engagement.

In summary, driven by self-expansion motivation, Tibetan adolescents expand their self-schema and increase cross-ethnic friendship self-efficacy. This leads to stronger contact behavioral intention and, consequently, greater cross-ethnic intimate contact, fostering the development of close cross-ethnic relationships.

#### 4.5. *The Moderating Role of Gender*

Gender moderated the path from self-expansion motivation to cross-ethnic friendship self-efficacy, with a stronger association among males than among females. This first-stage moderation was further reflected in the indirect effects that passed through cross-ethnic friendship self-efficacy: both the indirect effect through cross-ethnic friendship self-efficacy alone and the chain indirect effect through cross-ethnic friendship self-efficacy and contact intention were stronger for males than for females.

One possible explanation for this gender difference lies in the lingering influence of traditional gender norms in Tibetan communities. Traditional Tibetan sociocultural expectations position men as the pillars of the family and leaders in society, and promote their empowerment through skill training, cultural participation, involvement in public affairs, and participation in central religious ceremonies (Ge et al., 2023). These role expectations expose Tibetan men more frequently to the outside world. In contrast, women in traditional Tibetan culture are typically expected to take on more intra-family responsibilities, such as childcare and domestic work. As a result, they are more inclined to form intimate relationships within the family, because such relationships are of more direct benefit to the fulfillment of their childcare and domestic responsibilities (Chen et al., 2023). Such gendered roles and expectations may restrict girls' social scope and reduce their opportunities to accumulate diverse experiences, especially in cross-ethnic interaction. Under these conditions, boys may find it easier to translate self-expansion motivation into confidence in cross-ethnic friendship, whereas this link may be weaker for girls.

At the same time, these gender differences should not be treated as fixed. With the increasing accessibility of basic education in Tibetan areas, the growth of non-farm employment opportunities, and the implementation of policies such as the Outline for Women's Development in China (2021-2030), there is a notable shift in gender ideologies. These changes are fostering greater awareness of gender equality in Tibetan communities. As a result, the gender gap in the role of self-expansion motivation for cross-ethnic friendship self-efficacy among Tibetan adolescents is expected to gradually diminish over time.

## 5. Limitations and Implications

This study has several limitations. First, the cross-sectional design does not allow us to capture the developmental dynamics of self-expansion motivation and cross-ethnic intimate contact or to draw strong causal inferences. Second, all data were based on adolescents' self-reports and may therefore have been influenced by social desirability bias. Third, all participants were recruited from the Gannan Tibetan Autonomous Prefecture in China, which limits the geographic diversity of the sample. Future research could include adolescents from other ethnic groups and regions to examine whether the present findings generalize across ethnic contexts. Finally, this study focused mainly on self-expansion motivation, whereas other self-expansion-related constructs, such as self-expansion potential, expectations, behaviors, and perceptions, may also shape cross-ethnic intimate contact and deserve further investigation.

Despite these limitations, the present findings have several practical implications for ethnic education in schools in Tibetan regions. First, schools should pay greater attention to fostering Tibetan adolescents' self-expansion motivation. One possible approach is to combine self-expansion-oriented activities with cross-ethnic interaction by organizing tasks or group activities that encourage students to work proactively with classmates from different ethnic backgrounds. Such activities may not only strengthen self-expansion motivation but also create more opportunities for meaningful cross-ethnic contact. Second, schools should help cultivate Tibetan adolescents' cross-ethnic friendship self-efficacy. This may be achieved by providing opportunities for successful interaction experiences and by sharing positive examples of cross-ethnic friendship, thereby helping students develop more confident expectations about cross-ethnic contact. Third, it is also important to strengthen adolescents' intentions to engage in cross-ethnic interaction. Through education and school-based outreach, teachers can emphasize the positive value of cross-ethnic contact, including broadening perspectives, building friendships, and supporting personal growth, so as to increase students' willingness to engage in such interaction. Finally, attention should also be paid to gender differences in cross-ethnic interaction. In particular, schools should work to strengthen the cross-ethnic friendship self-efficacy of Tibetan girls and reduce the constraints associated with traditional gender-role expectations. This may involve creating a more gender-equal campus climate, especially in cross-ethnic interaction activities, so that girls have equal opportunities for participation, expression, and visibility. In addition, gender equality education may help students reflect critically on traditional gender roles, develop a more positive sense of self, and promote more equitable participation in interethnic interaction.

## 6. Conclusions

This study examined the relationship between Tibetan adolescents' self-expansion motivation and cross-ethnic intimate contact, highlighting the chain-mediated roles of cross-ethnic friendship self-efficacy and contact behavioral intention, as well as the moderating effect of gender. These findings provide a foundational understanding of the mechanisms underlying cross-ethnic intimate contact in the context of Chinese Tibetan culture. The results suggest that more opportunities should be created for Tibetan adolescents to engage with peers from other ethnic groups, thereby enhancing their self-expansion motivation, fostering positive cross-ethnic friendship self-efficacy and contact behavioral intention, and supporting the development of tailored cross-ethnic interaction strategies that account for gender differences.

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