Article

Sociocultural Adaptation Profiles of Ethnic Minority Senior High School Students in Mainland China: A Latent Class Analysis

Aoxue Su [1,*], Wei He [1] and Taichao Huang [1]

College of Science, Minzu University of China, Beijing 100081, China; cunhw@sina.com (W.H.);
bayes101@126.com (T.H.)

* Correspondence: suaoxue@muc.edu.cn; Tel.: +86-10-6893-3910

Abstract: This study aimed to quantitatively determine the sociocultural adaptation profiles of ethnic minority senior high school students in mainland China. A large-scale questionnaire survey of 1873 Grade 12 students from 31 interior ethnic boarding schools throughout China was conducted. Through exploratory and confirmatory factor analyses, the underlying structure of the sociocultural adaptation questionnaire was uncovered as consisting of three domains and six factors: General adaptation (daily life and school management), academic adaption (learning strategies and learning self-efficacy), and interaction adaptation (interethnic contact and cultural identity). By performing latent class analysis, four distinct sociocultural adaptation profiles of students were distinguished: The well-adapted group (28.0%), the general adaptation group (31.0%), the interaction adaptation group (24.4%), and the maladaptation group (16.6%). The results of chi-squared and variance analyses showed that the sociocultural adaptation profiles of ethnic minority senior high school students were significantly related to sociodemographic variables, such as ethnicity, class organization, hometown location, and family socioeconomic status. These profiles can be used to evaluate changes in ethnic minority students' sociocultural adaptation and will contribute to the perfection of the ethnic minority boarding school system and the ultimate realization of inclusive and equitable quality education in China.

Keywords: interior ethnic boarding school; inclusive and equitable quality education; sociocultural adaptation; latent class analysis

1. Introduction

The Education 2030 agenda, as a global programmatic document on education for sustainable development, focuses on inclusion and equity [1]. Everyone, especially disadvantaged groups such as people with disabilities, immigrants, indigenous people, and ethnic minorities, should have the opportunity to receive equal, quality education and the chance of lifelong learning.

There is no lack of empirical evidence highlighting the difficulties encountered by minority students in the education system worldwide [2–5]. Compared with mainstream students, ethnic minority students often have lower academic achievement and weaker employment competitiveness [6]. To realize the equitable quality education goal, various policies and governmental strategies have been designed to enable students of different ethnicities and social class backgrounds to have the opportunity to receive equitable quality education. As a result, the study performance and employment competitiveness of all students have improved. China's ethnic minority boarding school system provides access to quality education to students from border ethnic areas.

China is a multiethnic country with 55 state-defined minority groups. Most ethnic minorities live in Chinese underdeveloped border areas where the economic conditions and educational foundation lag far behind the interior contemporary societies. In order to narrow the educational gap between ethnic minority areas and interior developed areas and to allow ethnic minority students in border agricultural and pastoral areas to enjoy quality education resources, since 1985, the Chinese government has funded minority middle and high school students from communities in Tibet to study at interior ethnic boarding schools thousands of kilometers away [7–11]. Modeled closely after this program, minority high school students from Xinjiang have also been funded to study at such boarding schools since 2000 [12–15]. Most of these schools, located in eastern and coastal cities of China, are supplies with the best educational resources and the most professional teachers. Minority students are selected to study in such boarding schools according to voluntary registration and examination admission. These boarding schools have always gained positive recognition from minority students and their parents, and as a result the scale of enrollment has expanded annually. A cumulative total of more than 250,000 students have been enrolled and nearly 100,000 college graduates have returned to Tibet and Xinjiang and become prominent members of their communities in all walks of life.

Interior ethnic boarding schooling has a strong cross-cultural education nature. Most of the ethnic minority students grew up in frontier minority regions with distinct cultural heritages. After coming to the interior and coastal cities with the dominant Han culture, it can be a real challenge for young ethnic minority students to fit into the new and radically different culture. They are faced with various difficulties in ways of life, natural environment, language, learning, psychology, and interpersonal communication. These students are far away from their families and local communities at the minimum age of about 12 years old, which is a critical period of forming their personality and values. Their capacity to adapt well to the dominant culture will directly affect their mental health, learning effect, views on their study experience, as well as the quality and effect of this unique schooling system. Therefore, it is very necessary to evaluate ethnic minority students studying under the dominant national culture by employing concepts from the research field of sociocultural adaptation, as this is key to promoting their mental health and improving the effectiveness of their education.

2. Literature Review

2.1. Studies on Cross-Cultural Adaptation

Cross-cultural adaptation refers to "the dynamic process by which individuals, upon relocating to new, unfamiliar, or changed cultural environments, establish (or reestablish) and maintain relatively stable, reciprocal, and functional relationships with those environments" [16]. Long-term immigrants [17–19] and temporary sojourners to different countries [20–24] have always been the focus of cross-cultural adaptation research. However, due to the differences between minority heritage cultures and the dominant national culture, ethnic minority populations also have to adapt to the host society in which they were born or raised. Therefore, the research object of cross-cultural adaptation has gradually expanded to ethnic minority groups within a society, such as American Indians in Oklahoma [25], Tibetans in China [26], ethnic minorities in Hong Kong [27], and so forth. However, adults may elect to limit their contact with individuals from different cultural backgrounds, while ethnic minority youths who study in the mainstream school environment have less control over their exposure to the dominant culture [28]. In addition, ethnic minority youths are at a critical stage of forming their values and ethnic identities; therefore, except for academic achievement, the cross-cultural adaptation of ethnic minority youths in multiethnic schools has gradually attracted the attention of scholars [28–31].

A number of different models of cross-cultural adaptation have been proposed [28,32], and one of the most widely accepted is that developed by Ward et al. [33]. They maintain that cross-cultural adaptation may be meaningfully divided into psychological (emotional/affective) and sociocultural (behavioral) adaptation dimensions. The former refers to feelings of well-being and satisfaction, whereas

the latter refers to the ability to "fit in" or negotiate interactive aspects of the host culture. Studies have shown that the better the sociocultural adaptation, the better the psychological adaptation [34].

2.2. Studies on Measurement of Sociocultural Adaptation

As one of the two major dimensions of the cross-cultural adaptation process, sociocultural adaptation has been repeatedly measured in many studies. For example, Furnham and Bochner (1983) proposed that the presence of social situations in the local environment that are not found in the culture of the sojourner results in difficulties and adaptation problems [35]. So, the Social Situations Questionnaire (SSQ) was developed to assess the difficulties and problems experienced by sojourners in daily social contact with local people. A widely used measurement of sociocultural adaptation, also the one adopted in this study, is the Sociocultural Adaptation Scale (SCAS) [36]. SCAS is a behavioral and cognitive measure developed to assess the difficulties encountered in a certain situation. Most of the items are applicable to different groups, so an advantage of the SCAS lies in its flexibility and modifiability to suit the needs of different samples. Based on the SCAS, some scholars have identified different domains of sociocultural adaptation, such as in the management field, in which the construct of sociocultural adaptation was divided into general, work, and interaction adaptation domains [37]. For overseas or ethnic minority students, work adaptation may be replaced by academic adaptation.

Variations in adaptation experiences have also gained scholarly attention. The adaptation classification of participants has often been created according to the scale scores, the scalar midpoint, or the median score, or the highest score may be selected as the cutoff criterion [38]. However, these traditional methods of dividing scores are not uniform and therefore subjective, so the comparison of classification results between different studies is almost impossible. To avoid the subjectivity of classification, latent class analysis (LCA) has been increasingly performed to explore variations in cross-cultural adaptation experiences and to identify different adaptation classes [39–41]. LCA is a technique used to classify observations based on patterns of categorical responses. This approach is characterized by the absence of a predetermined classification number, which avoids the subjectivity of other cluster methods such as K-means and has been widely applied to the potential heterogeneity of research groups for psychological, emotional, and behavioral diagnosis [42–45].

2.3. Studies on the Sociocultural Adaptation of Ethnic Minority Students in China

In recent years, related studies of interior ethnic boarding schooling have attracted an increasing amount of attention from Chinese and international scholars. The background, aims, history, operating mechanism, and social effects of these special schools have been explored [7–15,46]. From the frontier to the interior, ethnic minority students have to face the huge cultural differences that characterize the strong cross-cultural education nature of interior ethnic boarding schooling with; so, the sociocultural adaptation of these students has become a research hot spot [47–52]. The challenges that ethnic minority students face in the process of sociocultural adaptation and the factors that affect their adaptation have been considered in thorough research.

However, these previous works tend to be descriptive case studies. As far as we know, no probability sampling-based quantitative empirical research has been conducted to identify distinct classifications of these ethnic minority students based on differences in their responses on the sociocultural adaptation indicators. Thus, the purposes of this study were as follows:

1. Identify the sociocultural adaptation classes of ethnic minority senior high school students, and
2. determine the sociodemographic characterizing elements for every class.

3. Materials and Methods

3.1. Study Site

There are mainly two kinds of interior ethnic boarding schools according to where the students come from: One is called the Tibet class, where minority students are from Tibet, and the other is

called the Xinjiang class, where minority students are all from Xinjiang. This research only focused on the Xinjiang class, but the research method is also applicable to a follow-up study on sociocultural adaptation of ethnic minority students from the Tibet class.

Xinjiang, located in China's northwest frontier, is a multiethnic region in China. According to the latest Chinese national census, 13 ethnic nationalities constitute nearly 60% of Xinjiang's total population, among which Uyghur is the largest ethnic group, who compose 45.8% (approximately 10,001,302 people) of the population. As a means of intellectual aid to Xinjiang, the Xinjiang class was established starting in 2000. In the 19 years from 2000 to 2019, the Xinjiang class experienced 11 large-scale enrollment expansions, and annual student enrollments expanded from 1000 students at the beginning to more than 9000 students. There are currently a cumulative total of more than 100,000 students enrolled in the Xinjiang class and more than 34,800 at-school students in 93 senior high schools located across 14 provinces and municipalities throughout China (see Figure 1).

Figure 1. Location of Xinjiang classes (14 provinces and municipalities marked in the blue box).

3.2. Participants

There are 93 senior high schools across 14 provinces and municipalities running Xinjiang classes. In each province and municipality, schools were randomly selected using a ratio of 1:3 for a total of 31 schools. Grade 12 students of Xinjiang classes in each school were selected as participants. As the final grade of the Xinjiang class, they have studied and lived in China's interior regions for three years (including a year of preparatory study), so it is more representative to test their sociocultural adaptation in China's interior regions.

An online questionnaire system was designed by the researchers and each school was responsible for organizing their students to participate in the survey. The respondents completed the questionnaire anonymously and they were told that the results were only for academic research and their teachers could not see their choices. In total, 1873 student questionnaires were collected online (see Table 1). Participants consisted of 664 boys (35.5%) and 1209 girls (64.5%), the percentage of girls was almost

two times higher than the percentage of boys, which is due to the enrollment being based on the academic performance of the Xinjiang class' admission examinations, and girls generally perform better than boys at this stage. As for hometown location, 33.5% of students were from urban regions and most of the students (66.5%) were from rural regions. Most of the participants reported that they are Uyghur (62.4%), followed by Han (14.4%), Kazak (9.7%), Hui (8.6%), other nationalities (4.9%). The high percentage of rural and Uyghur students was due to the enrollment policy of the Xinjiang class, which stipulates that 80% of the students should be from the rural and nomadic regions of southern Xinjiang, where 90% of Uyghurs live. As for the class organization, 51.9% of the participants were in the divided class, which means the ethnic minority students and local students studied in separate classrooms in the same school, and 48.1% of the participants were in the mixed class, which means the ethnic minority students and local students study in the same classrooms.

Table 1. Demographic information of samples (N = 1873).

	Frequency (N)	**Percentage (%)**
Gender		
Boys	664	35.5
Girls	1209	64.5
Hometown Location		
Urban	628	33.5
Rural	1245	66.5
Ethnicity		
Uyghur	1169	62.4
Han	270	14.4
Kazak	182	9.7
Hui	161	8.6
Other	91	4.9
Class Organization		
Mixed Class	901	48.1
Divided Class	972	51.9

3.3. Instrument

The sociocultural adaptation questionnaire consisted of two major sections: Personal demographic information and a composite scale that measured sociocultural adaptation.

Personal Demographic Information. This included gender, ethnicity, hometown location, class organization, parents' careers, parents' education, and family assets.

Sociocultural Adaptation. The SCAS, developed by Ward et al. [36], has proved to be a flexible and modifiable instrument to suit the needs of different samples. Using the original items of the SCAS as a foundation, a Chinese version of the scale has been designed to probe the three domains of general adaptation (managing daily life), academic adaptation (accomplishment of study-related objectives), and interaction adaptation (relating effectively to host nationals). The validity and reliability of this scale have been validated in the Chinese student context [51–55]. For the study of ethnic minority students in China, general adaptation was further divided into daily life and school management adaptation dimensions, academic adaptation was further divided into learning strategies and learning self-efficacy dimensions, and interaction adaptation was further divided into interethnic contact and cultural identity dimensions [51–53]. The final scale contains 24 items in total and each dimension includes four items. The specific descriptions of each dimension are shown in Table 2.

Table 2. Specific descriptions of each dimension in the sociocultural adaptation questionnaire.

Dimension	Description	Example Item
Daily life	Daily life related to local food, weather, etc.	Getting used to the local food
School management	Rules used to regulate the behavior of students in the school	Following rules and regulations in school
Learning strategies	Behaviors and techniques students adopt in learning activities	Expressing your ideas in class
Learning self-efficacy	Students' confidence that they can complete a learning task	Being confident that you can do well in the courses
Interethnic contact	Communication between people of different ethnic groups	Making friends with local Han students
Cultural identity	Identification with local culture	Taking a local perspective of the culture

3.4. Data Analysis

3.4.1. Factor Analysis

Factor analysis was performed to examine the construct validity of the sociocultural adaptation questionnaire. First, exploratory factor analysis (EFA) was conducted to identify the latent structure of items in the questionnaire. Principal component analysis with a varimax rotation was used to extract the factors. The number of retained factors was determined by combining an eigenvalue greater than one and the scree plot criteria. The items were retained based on the criteria that the factor loading of each item was above 0.4 and the communality of items was above 0.3. Then, confirmatory factor analysis (CFA) was conducted to verify whether the structure obtained by EFA had a good enough fit. Several fitting indexes should be reported and the conventions are that χ^2/df should be around 1, the root mean square error of approximation (RMSEA) should be below 0.05, and the comparative fit index (CFI)and tucker-lewis index (TLI) more than 0.9 [56]. All factor analyses were performed in Mplus 5.21 [57].

3.4.2. Latent Class Analysis

LCA was performed to explore variations in sociocultural adaptation experiences and identify distinct adaptation classes of ethnic minority students based on similar patterns of scores on the sociocultural adaptation factors. LCA is a statistical technique that identifies the presence of unobservable subgroups (latent classes) within a population using patterns of association among observed variables [58]. This probability-model-based classification method can ensure both the maximum difference between the classified classes and the minimum difference within the classes. Further, LCA performs better than other clustering methods such as K-means, as the former provides the fit statistics (e.g., Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and sample-size adjusted BIC (aBIC)) to measure the accuracy and effectiveness of classification, whereas in other clustering methods, determining the optimal number of classes is an arbitrary decision [59]. By using LCA, distinct sociocultural adaptation classes could be identified and various dimensions in participants' sociocultural adaptation experiences could be captured. LCA was done in Mplus 5.21.

3.4.3. Significance Test of Difference

To examine the characterizing elements for each sociocultural adaptation class, ANOVA and χ^2 tests were used to investigate the differences between students with different sociocultural adaptation classes on sociodemographic variables. The significance test of difference was performed in SPSS 20 [60].

4. Results

4.1. Validation of the Sociocultural Adaptation Questionnaire

EFA was performed on randomly selected subsets (n = 936) to examine the latent structure of the sociocultural adaptation questionnaire. Six factors were extracted by principal component factor analysis and these factors accounted for 58.92% of the variance. As shown in Table 3, the factor loading of each item was greater than 0.4 for the relevant factor and all 24 items were retained. Further, the Cronbach's α coefficient for each of the six identified factors was around 0.72–0.84 and the overall Cronbach's α coefficient was 0.89, suggesting the good reliability of the questionnaire in mainland China.

Table 3. Exploratory factor analysis (EFA) results and reliability of the sociocultural adaptation questionnaire.

Item No.	Factor Loading					
	School Management	Daily Life	Learning Self-Efficacy	Learning Strategies	Interethnic Contact	Cultural Identity
1	0.686					
2	0.645					
3	0.597					
4	0.589					
5		0.761				
6		0.756				
7		0.729				
8		0.717				
9			0.722			
10			0.707			
11			0.688			
12			0.686			
13				0.761		
14				0.661		
15				0.667		
16				0.666		
17					0.851	
18					0.824	
19					0.675	
20					0.637	
21						0.773
22						0.730
23						0.677
24						0.665
Cronbach's α	0.722	0.832	0.780	0.796	0.734	0.787

CFA was performed on the other subsets (n = 937) to verify whether the structure obtained by EFA had a good enough fit. The fitting degree analysis results of the structural equation model are listed in Table 4, which clearly show that the questionnaire has good validity in mainland China, as the fitting index values were all within the acceptable ranges.

Table 4. Confirmatory factor analysis (CFA) results for the sociocultural adaptation questionnaire.

Fitting Index	χ^2	*p*	χ^2/df	RMSEA	CFI	TLI
Value	3736.5	<0.001	1.996	0.033	0.967	0.962

Correlation analysis was performed on the full sample to examine correlations between the six identified factors. As shown in Table 5, all six factors were significantly correlated with each other; in

particular, school management was highly correlated with daily life, learning self-efficacy, and learning strategies. Further, learning self-efficacy was highly correlated with learning strategies (r > 0.4).

Table 5. Results of the correlation analysis.

Factors	School Management	Daily Life	Learning Self-Efficacy	Learning Strategies	Interethnic Contact	Cultural Identity
School Management	1					
Daily Life	0.475 **	1				
Learning Self-efficacy	0.419 **	0.242 **	1			
Learning Strategies	0.408 **	0.235 **	0.534 **	1		
Interethnic Contact	0.204 **	0.078 **	0.153 **	0.175 **	1	
Cultural Identity	0.211 **	0.132 **	0.169 **	0.205 **	0.283 **	1

Note: ** $p < 0.01$.

4.2. Students' Sociocultural Adaptation Profiles

LCA was performed to investigate whether the ethnic minority students can be assigned to different sociocultural adaptation classes based on similar patterns of scores on the sociocultural adaptation factors. To identify the optimal number of sociocultural adaptation classes, LCA was performed separately for the sociocultural adaptation of students with one to six classes. The fitting indices of these six models are shown in Table 6. Among the four fitting indicators, the lower the values of AIC, BIC, and aBIC, the better the model fit, while some scholars have pointed out that the BIC should be given greater weight among these indices [61]. As a result, a model with four classes fits best. In addition, entropy represents a model's ability to achieve correct classification, and the higher the value, the better the model fit. Entropy for the four classes was 0.895, suggesting the sound classification ability of four classes. Therefore, four classes were chosen as the optimal sociocultural adaptation classes.

Table 6. Comparison of fitting indices of six models.

Model	AIC	BIC	aBIC	Entropy
1	146,928.1	147,741.8	147,274.8	——
2	136,960.5	138,593.4	137,656.2	0.823
3	134,333.6	136,785.8	135,378.3	0.867
4	132,566.2	135,337.5	132,559.9	0.895
5	131,333.3	135,523.9	133,076.1	0.895
6	130,460.6	135,470.4	132,752.5	0.895

After determining the optimal number of sociocultural adaptation classes, the last step was to assign each student to the appropriate latent class through model assignment; that is, students were assigned to the sociocultural adaptation class to which they had the highest probability of belonging. Then, to further validate the four-class solution, ANOVAs were performed to investigate whether students belonging to different profiles differed on the previously identified six factors of sociocultural adaptation. The results in Table 7 show that the differences between students from different profiles were significant. There were large effects for school management ($F(3, 1873) = 459.64$, $p < 0.001, \eta_p^2 = 0.43$), daily life ($F(3, 1873) = 532.12$, $p < 0.001, \eta_p^2 = 0.46$), learning self-efficacy ($F(3, 1873) = 287.01$, $p < 0.001, \eta_p^2 = 0.32$), learning strategies ($F(3, 1873) = 268.77$, $p < 0.001$, $\eta_p^2 = 0.30$), interethnic contact ($F(3, 1873) = 167.22$, $p < 0.001$, $\eta_p^2 = 0.21$), and cultural identity ($F(3, 1873) = 379.39$, $p < 0.001$, $\eta_p^2 = 0.37$). Multiple comparison tests showed that the differences between the four profiles were significant on school management, learning self-efficacy, and learning strategies (all *p*s < 0.001). On daily life, students in the third and fourth classes were not significantly different ($p = 0.361$), but they were significantly different from the first and second classes (all *p*s < 0.001). On interethnic contact and cultural identity, students in the first and third classes were not

significantly different ($p = 0.091$ and $p = 1.00$), but they were significantly different from the second and fourth classes (all ps < 0.001). Figure 2 more intuitively shows the results.

Table 7. Mean standardized scores on the six factors in each class and ANOVA results.

Factors	Sociocultural Adaptation Profiles				Sig. diff.
	1	**2**	**3**	**4**	
School Management (z)	0.87	0.08	−0.43	−0.99	1 > 2 > 3 > 4
Daily Life (z)	0.84	0.25	−0.81	−0.71	1 > 2 > 3,4
Learning Self-efficacy (z)	0.78	−0.01	−0.31	−0.85	1 > 2 > 3 > 4
Learning Strategies (z)	0.76	−0.05	−0.23	−0.86	1 > 2 > 3 > 4
Interethnic Contact (z)	0.42	−0.27	0.41	−0.77	1,3 > 2 > 4
Cultural Identity (z)	0.38	−0.05	0.28	−0.94	1,3 > 2 > 4

Note: Mean standardized score, also called mean z-score, represents the relative position of an original score in a group. For example, 0.87 here is the average z-score of the students belonging to the first profile on the school management factor (consisting of four items).
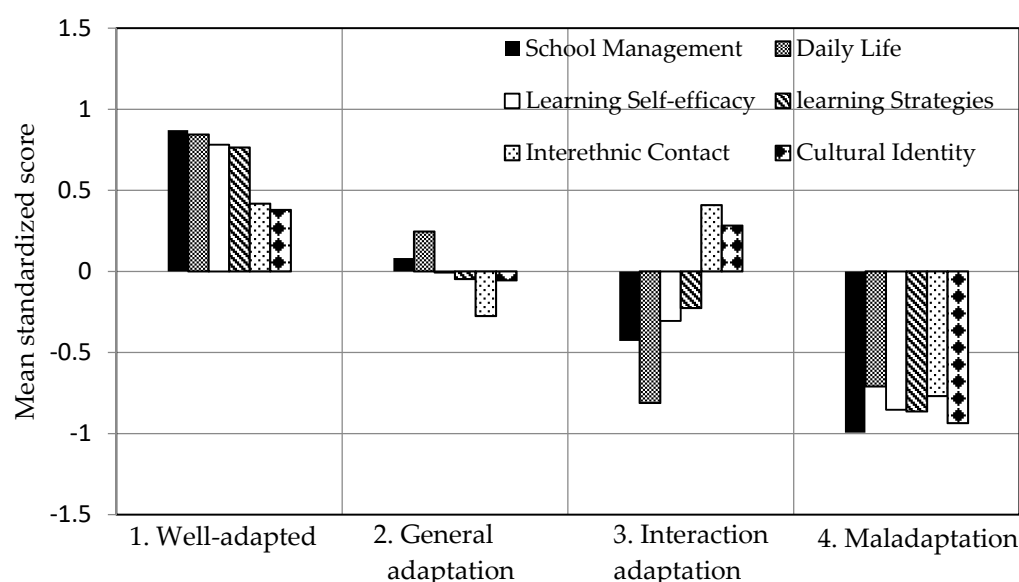

Figure 2. Visual representations of mean standardized scores on the six factors in each class.

The resulting students' sociocultural adaptation profiles were interpreted as follows. Students in the first class (28.0%) scored highest on all sociocultural adaptation measures, so we called them the well-adapted group. The biggest group of students (31.0%) formed the second class. These students scored quite close to average on the academic domains (consisting of learning self-efficacy and learning strategies factors), while having relatively high scores on the general adaptation domains (consisting of school management and daily life factors) and slightly low scores on the interaction adaptation domains (consisting of interethnic contact and cultural identity factors), so they were labeled as the general adaptation group. Students in the third latent class (24.4%) were named the interaction adaptation group. On four factors measuring the general and academic adaptation, these students scored below average, but they scored relatively high on the two factors measuring interaction adaptation. Finally, the students belonging to the fourth latent class (16.6%) were named the maladaptation group, as they scored far below average on all measures.

4.3. Student' Demographic Factors and Sociocultural Adaptation Profiles

ANOVA and χ^2 tests were used to investigate which sociodemographic variables were related to the students' attribution to one of the latent classes. The results in Table 8 show that the sociocultural adaptation profile was not significantly related to the students' gender $\left(\chi^2(3, 1873) = 5.78, p = 0.123\right)$,

but it was significantly related to the students' class organization $\left(\chi^2(3, 1873) = 3.27, p = 0.004\right)$. Students belonging to the profile of well-adapted (53.4%) were more in mixed classes than the profiles of general adaptation (47.7%), interaction adaptation (45%), and maladaptation (46%). The sociocultural adaptation profile was also significantly related to the students' hometown location $(\chi^2(3, 1873) = 17.56, p < 0.001)$, with proportionally more urban students belonged to the profile of well-adapted (37.6%) and interaction adaptation (38.3%) than general adaptation (28.3%) and maladaptation (29.6%). The students' ethnicity revealed significant differences between their sociocultural adaptation profiles $(\chi^2(3, 1873) = 13.26, p < 0.001)$, with proportionally more Uyghur students belonging to the profile of maladaptation (70.4%) than the profiles of well-adapted (58.4%), general adaptation (61.7%), and interaction adaptation (59.7%). Students belonging to the profile of interaction adaptation $(M = 0.42, SD = 2.98; F(3, 1873) = 6.47, p < 0.001)$ had significantly higher family socioeconomic status (SES) than students belonging to the profile of well-adapted $(M = 0.02, SD = 2.98)$, general adaptation $(M = -0.17, SD = 2.75)$, and maladaptation $(M = -0.45, SD = 2.73)$, and students belonging to the profile of well-adapted had significantly higher family SES than those belonging to the profile of maladaptation.

Table 8. Information on demographic variables for students in the four latent classes.

Variables	Sociocultural Adaptation Profiles				Sig. Diff.
	1. Well-Adapted	2. General Adaptation	3. Interaction Adaptation	4. Maladaptation	
Gender (% boy)	35.7	32.3	39.4	35.0	n.s. [1]
Class organization (% mixed class)	53.4	47.7	45.0	46.0	1 > 2, 3, 4
Hometown location (% urban)	37.6	28.3	38.3	29.6	1,3 >2, 4
Ethnicity (% Uyghur)	58.4	61.7	59.7	70.4	4 > 1, 2, 3
SES [2] (means)	0.02	−0.17	0.42	−0.45	3 > 1 > 4, 3 > 2

Note: 1. n.s. means not significant. 2. SES index consists of parents' careers, education, and family assets.

5. Discussion and Implications

By collecting questionnaires from 1873 ethnic minority senior high school students throughout mainland China, the current study presents a primary investigation of the sociocultural adaptation of these ethnic minority students. The sociocultural adaptation profiles of the students and the sociodemographic characterizing elements for every profile have been identified. On this basis, several recommendations for the sustainable development of the interior ethnic boarding school system are proposed.

5.1. Prevalence of Sociocultural Adaptation Difficulties

A widely used questionnaire (SCAS) in the field of sociocultural adaptation was used and the validation of the questionnaire was examined by EFA and CFA. As a result, six underlying factors of the questionnaire were extracted. Then, four distinct latent classes to which individual students belonged were determined by performing LCA. The results showed that 28.0% of the students belonged to the profile of well-adapted. These students had the highest scores on all sociocultural adaptation measures. As the name indicates, students belonging to this profile were well adapted to the general life, academic learning, and social interaction in China's interior regions.

Except for the students belong to the well-adapted profile, other students showed different aspects and degrees of sociocultural adaptation difficulties. About 31.0% of the students belonged to the general adaptation profile, as they reported to have positive adaptation regarding general daily life, rules, and regulations in the boarding school but poor adaptation regarding effective contact with the host nationals. That is, they are more in line with functional adaptation rather than cultural-identity-related adaptation.

In contrast, the third profile, which consisted of 24.4% of the students, reported a completely different adaptation profile and was therefore named the interaction adaptation profile. They reported to have positive adaptation only regarding effective contact with the host nationals but poor adaptation regarding general daily life, rules, regulations, and academic learning in the boarding school. That is, they are perhaps better at adapting their identity in multiethnic classrooms rather than academic or functional adaptation.

Finally, 16.6% of the students belonged to the profile of maladaptation. These students scored far below average on all measures, which reflects that these students face great difficulties and challenges in the sociocultural adaptation process.

Considering that the participants of this research were all Grade 12 students, as the final grade of the Xinjiang class, they have studied and lived in China's interior regions for three years (including a year of preparatory study), so the results showed the prevalence of sociocultural adaptation difficulties of ethnic minority students. The results are also supported by similar findings from prior studies [48–53]. The differences are that the prior studies were not able to identify distinct sociocultural adaptation classes and capture various dimensions in students' sociocultural adaptation experiences. Of course, the specific information about the proportion and characteristics of different adaptation groups is even less available.

5.2. Sociodemographic Factors Associated with Sociocultural Adaptation Profile

Sociodemographic data, such as gender, ethnicity, class organization, hometown location, and family SES, were selected to examine the association with the sociocultural adaptation profile by using ANOVA and χ^2-difference tests. We found that there was no significant relation between gender and sociocultural adaptation profile. There is currently no consistent research conclusion on the effect of gender on sociocultural adaptation. This may be related to the individual's cultural background, which may have different requirements for boys and girls. However, there was a significant relationship between ethnicity and sociocultural adaptation profiles, with proportionally more Uyghurs in the maladaptation group than other profiles. This finding reflects the influence of cultural distance on sociocultural adaptation. Cultural distance between host and guest groups has always been regarded as the key factor of sociocultural adaptation [34,62]. The cultural distance between Uyghur and Han nationalities (the main nationality of China) is fairly large, as the former is rooted in a traditional nomadic culture while the latter is in a traditional sedentary farming culture. The two have great differences in ways of life, natural environment and climate, language, national psychology, interpersonal communication, recreational activities, family structure, religious culture, and so on. So, it would be a real challenge for Uyghur students to fit into the new and radically different culture.

Another finding of this study is that there was a significant relation between class organization and sociocultural adaptation profiles. Students belonging to the profile of well-adapted were more in mixed classroom than other profiles. This finding reflects the influence of intergroup contact on sociocultural adaptation. According to the intergroup contact theory [63], effective intergroup contact would increase intergroup trust and promote mutual cultural identity. Ethnic minority students in mixed classroom have more opportunities to learn and communicate with local students. The good learning atmosphere around them helps them develop good learning habits and motivate their learning. In addition, students from different ethnic groups have more opportunities to interact with each other, which helps deepen their understanding of each other's ethnic cultures.

Furthermore, we found that there was a significant relationship between students' hometown location and sociocultural adaptation profiles, with proportionally more urban students in the well-adapted and interaction adaptation groups than in the general adaptation and maladaptation groups. In contrast, students of the former two sociocultural adaptation profiles scored relatively higher in the dimension of interaction adaptation. This finding reflects the influence of cultural environment on interaction adaptation. Generally speaking, the development of rural regions lags

behind that of urban regions. Different development conditions affect the cultural diversity brought about by the frequent movement of urban populations, as well as the cognition of ethnic minority students. To be more specific, compared with rural regions, urban regions have frequent population movements, and so ethnic minority students from urban regions had more contact with the dominant national culture before they came to inland China. The constant blending of different cultures makes them face interaction adaptation problems earlier. After a long period of cognitive adjustment and skill learning, they have accumulated a considerable amount of interaction experience, such as getting along with members of the Han nationality, understanding the values of Han culture, accepting the differences between cultures, and so on, which is very helpful for their interaction adaptation after coming to the boarding schools.

Apart from hometown location, the results also showed that the interaction adaptation group had significantly higher family SES than other profiles, as well as the well-adapted group compared with the maladaptation group. In contrast, students of these former two sociocultural adaptation profiles scored relatively higher in the dimension of interaction adaptation. This finding reflects the influence of family SES on interaction adaptation. Many studies have shown that low SES affects the healthy development of children's social emotions [64,65], and as a result, children tend to produce negative social emotions, which are mainly manifested in children's externalized behaviors (such as fighting, difficulty in getting along with others, irritability, etc.). Therefore, children from families with lower SES tend to lack the necessary social interaction skills, which are detrimental to their lifetime development.

5.3. Recommendations for the Sustainable Development of the Interior Ethnic Boarding School System

The sociodemographic factors that we found to be associated with sociocultural adaptation profiles can be used to reveal the key groups of sociocultural adaptation intervention and provide a reference for further in-depth research and formulation of tailor-made interventions. On this basis, the following recommendations for the sustainable development of the interior ethnic boarding school system are put forward.

Strengthening multicultural training for teachers and students in these boarding schools. Multicultural training, targeting both the frontier ethnic minority students and teaching staff of the boarding schools, should be carried out before the school term begins. In this way, the ethnic minority students will learn about the relevant climate, environmental, and cultural characteristics of the city they will be going to, which will therefore prepare them for psychological acceptance. Further, the teaching staff of the schools will also learn about the eating habits, customs, and cultural traditions of these students, as well as their learning foundation, thinking characteristics, and so on. Mutual understanding between different cultures is critical for these ethnic minority students to reduce cultural strangeness and to adapt to the unfamiliar environment quickly.

Further carrying forward mixed-class education. Sherif et al. concluded through experiments that cooperation among youths of different ethnic groups is more conducive to the formation of harmonious ethnic relations [66]. Mixed-class education would provide a good cultural exchange platform for ethnic students. On this platform, students of different ethnic groups are of the same age, have the same learning tasks, and live in the same environment. Therefore, it is not only conducive to the improvement of academic performance of ethnic minority students but also conducive to interethnic communication among students of different ethnic groups.

Building a platform for multicultural exchange. According to intergroup contact theory [63], effective intergroup contact should increase intergroup trust and promote mutual cultural identity. The boarding schools should build a multicultural exchange platform to provide the ethnic minority students with more opportunities to contact the host society. For example, organizing students to participate in community fellowship activities on holidays, pair up with local loving families, and establish "hand-in-hand" cooperative relations with other local schools. By forming a "trinity" social integration network system of school–community–fellowship, students can integrate into

community life, get close to local community residents, and have a sense of belonging to the host culture, which will also enable the local community residents to have a deeper understanding of ethnic minority cultures.

6. Limitations

This study also has some limitations that require further research. Firstly, only sociodemographic data, such as gender, class organization, hometown location, family SES, and ethnicity, were selected to examine the association with sociocultural adaptation profile. However, factors related to sociocultural adaptation include both internal and external factors [50], while sociodemographic factors are only part of the internal factors. Other internal factors, such as personality, appraisal and coping style, and so forth, are also possibly associated with sociocultural adaptation. Moreover, previous studies have shown that other possible external factors, such as social support, length of residence in the new culture, prejudice, and discrimination, are also possibly associated with sociocultural adaptation [36,49]. Therefore, in order to obtain a fuller understanding of the factors that affect students' sociocultural adaptation, future research should consider all possible internal and external factors.

Secondly, this study only employed a cross-sectional survey of ethnic minority students in Grade 12. However, previous studies have shown that the psychological well-being may follow a curvilinear path approximating a U-curve [67], while social skills acquisition, including communications abilities, should reflect a linear improvement over time [68]. That is, sociocultural adaptation is a long-term process with different development stages that are closely related to time variables. Therefore, future research could consider conducting longitudinal tracking research to investigate the development process of students' sociocultural adaptation and to further get the whole picture of students' sociocultural adaptation.

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