Effects of Parenting Mode on Student Adaptability: The Mediating Effect of Irrational Beliefs

Hua Kong

Guangdong Ocean University

Xu Hongwang

Zhaotong University

Deng Yujian

Guangdong Ocean University

Wang Xuefeng

Guangdong Ocean University

Zhang Wei (✉ khzhangwei110@sina.com)

Guangdong Ocean University

Research Article

Keywords: Students' adaptation, Emerging adulthood, Parenting mode, Mediating effect, Irrational beliefs

Posted Date: March 8th, 2022

DOI: <https://doi.org/10.21203/rs.3.rs-1368014/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Abstract

Backgrounds: When facing the new growth field of university, some college students will quickly form good university adaptation, while others will have maladaptation behavior. The students' adaptations of to the growth environment in universities and smooth transition to adulthood are the important topics in recent years.

Methods: Present study introduces irrational beliefs to investigate the effects of parenting mode on maladaptation of university students. The questionnaires based on simplified parenting mode (Chinese), irrational belief and adaptability were administered in a survey of 510 university students in Zhanjiang on October, 2021, by using the random sampling method. Parenting mode was used as the independent variable, while the emotionally warm, overprotective and rejecting types were used as the indices. Further, the irrational beliefs including summary comments, awful beliefs and low tolerance to setbacks as well as maladaptation were included in the mediation model for analysis.

Results: The results showed that emotionally warm parenting mode was negatively correlated with summary comments ($r = -0.334$), awful beliefs ($r = -0.108$) and low tolerance to setbacks ($r = -0.153$). The rejection parenting mode was negatively related with absolute requirements ($r = -0.143$), and learning motivation ($r = -0.157$), interpersonal adaptation ($r = -0.283$) and physical and psychological adjustment ($r = -0.083$). Overprotection was negatively correlated with absolute requirements ($r = -0.042$) and interpersonal adaptation ($r = -0.042$). The mediating effect of irrational beliefs (low tolerance to setbacks, awful beliefs and absolute requirements), the lower and upper limits of Bootstrap confidence interval were 0.141 and 0.532, respectively, excluding 0, which indicated that the mediating effect is true.

Conclusion: Through the analysis of the data, this study believes that irrational beliefs such as low tolerance to setbacks, awful beliefs and absolute requirements mediate the effects on school adjustment. Parenting mode can influence adaptability of university students. Emotionally warm parents strengthen the adaptability of university students. By contrast, negative parenting modes such as overprotection and rejection inculcate irrational beliefs, resulting in maladaptation of university students.

Background

Adaptation of students to the growth environment in universities and smooth transition to adulthood are important topics at the university level of development. Appropriate and effective adaptation of individuals to environment is called adaptive behavior [1]. Exposure to a new environment at the university leads to rapid acquisition of new learning habits and friendships, showing good adaptability of university students. However, some students will develop maladaptation behaviors, including learning fatigue, skipping classes and human communication disorders. Therefore, adaptability of university students is a topic that has attracted increasing attention in recent years.

Some scholars believed that "adaptability of university students" refers to a psychological equilibrium that students develop after continuous behavioral adjustment to surrounding environment, classmates and teachers after admission into university [2]. It is also a process of physical and psychological adaptation to the local environment. Some scholars also pointed out that "adaptability of university students" requires changes in individual behavior to reach cognitive and emotional balance and comply with external environmental and regulatory standards [3]. It requires healthy adaptation to changing living and learning environment. Researchers reported that "adaptability of university students" is the process in which freshmen adjust psychologically and behaviorally to perform changing roles in the new university environment [4]. According to Watson [5], the adaptability of university students mainly refers to psychological and behavioral processes facilitating adaptation to the new environment by freshmen in the university based on personal adjustment and external support.

With respect to studies involving the role of factors associated with adaptability of university students, Bi et al. [6] investigated the effects of personality traits and interpersonal dynamics in a family on student adaptation. Zhu et al. [7] reported that students with different personality traits and family background adapt differently. Credé and Niehorster [8] summarized the factors influencing the adaptability of university students, including demographic characteristics, early achievements, experience in universities, self-assessment, personality traits, coping style, social support, and family relationship. Thus, Chinese and foreign studies investigating factors influencing the adaptability of university students mainly involve environmental and individual elements. Environmental factors mainly include family, interpersonal and school environment. Individual factors mainly refer to personality traits. External factors involve the quality of relationship with family members (eg, parenting mode) [9]. According to the Evolutionary Theory of Socialization, parents guide children to develop different behavioral modes of environmental adaptation based on parenting styles [10]. Parenting mode was firstly proposed by Diana Baumrind, a psychologist. From a psychological perspective, parenting mode refers to ordinary behavioral pattern of parents associated with raising and education of their children. It includes not only parenting behaviors, but also parenting emotions and attitudes

[11]. Thus, parenting mode includes language and non-language behaviors or emotional atmosphere created by parents [12]. Arrindell et al. [13] divided parenting modes into warm emotional, overprotective and rejection types. The warm emotional type indicates prompt emotional recognition of children's needs by parents by providing adequate love and supports, thereby ensuring two-way information flow, smooth communication and ordered and reasonable parent-child dependence [14–16]. Overprotection refers to parental recognition of children's needs via excessive control and lack of space to exercise freedom of choice, thereby leading to one-way information flow and tense parent-child relationship. Rejection indicates parents' insensitivity to the needs and appeals of their children, which hinders parent-child communication. Moreover, parents punish and excessively constrain children's freedom. Researchers generally regard overprotection and rejection as negative parenting modes [17, 18].

During parenting, parents always impose their own values of rational and irrational beliefs on their children unconsciously. Compared with the other two parenting modes, the warm emotional type can induce development of rational beliefs and decrease maladaptation of university students. First, parents interact and communicate with children during parenting, resulting in shared positive emotional experiences. Therefore, parents can provide timely emotional feedback and material support to alleviate tension and anxiety in any maladaptation effectively [19]. Second, the warm emotional type contributes to a relatively close relationship between parents and children via two-way interaction and communication. As a result, children experience fewer negative emotions, such as insecurity and loneliness. Effective two-way interaction between parents and children in the new environment decreases emotional pressure associated with maladaptation [20, 21]. Third, experiencing parental emotions during stressful events is highly effective in enhancing psychological adaptation of children [22]. Increased parental encouragement and support can contribute to psychological health of children, including self-reliance [23]. Positive psychological traits and strategies to cope with crisis enable increased utilization of resources to resolve environmental stress, which, in return, can strengthen their self-efficacy. In contrast, overprotected and rejected children experience negative emotions during growth and easily accumulate irrational beliefs. Irrational beliefs refer to absolute requirements and distorted perception of self, others, surrounding environment and objects [24]. In a university setting, which is beyond parental control, children encounter a new environment, make new friends and new interpersonal communication, and are forced to adapt to various tensions and anxieties caused by environmental changes [25]. To investigate the impact of previous beliefs on behavioral adaptation, this study introduced the concept of irrational beliefs to discuss the relationship between parenting mode and adaptability of university students outside parental control. The mechanism of parenting mode and its effect on the adaptability of university students and their development are discussed. Results provide a standard of reference for universities to implement accurate student management and prevent maladaptation.

According to previous studies, a stable family structure, healthy development of family function and supportive parents are conducive to development of a positive personality in adolescence [26]. Further, children who have parents with higher education display better psychological health and less misconduct [27]. Based on the foregoing analysis, this study proposed the following hypothesis:

H1. Emotionally warm parenting mode decreases irrational beliefs and strengthens the adaptability of university students.

H2. Rejection and overprotection have a direct negative influence on the adaptability of university students.

H3. Rejection and overprotection type inculcate irrational beliefs in university students.

Research Methods

Research subjects

A questionnaire survey was conducted in a university located in Zhanjiang on October, 2021 by using random sampling method. A total of 510 students participated in the survey and 510 completed questionnaires were received, showing a collection rate of 100%. The specific sample composition is shown in Table 1.

Table 1
Descriptive analysis of demographic characteristics (n = 510)

Variables	Frequency	Percentage
Gender		
Male	232	45.5
Female	278	54.5
Nationality		
Han Nationality	496	97.3
Minority	14	2.7
Grade		
Freshmen	282	55.3
Sophomore	125	24.5
Junior	62	12.2
Senior	41	8.0
Politics Status		
League member	403	79
Ordinary citizen	88	17.3
CPC member (including probationary Party member)	19	3.7
Only child or not		
Yes	114	22.4
No	396	77.6
Stay-at-home children or not before university		
Half stay-at-home children	53	10.4
Complete stay-at-home children	22	4.3
No	435	85.3

Research Tools

Simplified parenting mode questionnaire for Chinese adolescents (S-EMBU-C)

In this study, the simple revised version [28] was administered. Since this study focuses on parenting mode, the parent questionnaire was integrated to generate 21 questions in three dimensions, including emotional warmth, overprotection and rejection. The questionnaire adopted the 4-level scoring method (1 = never and 4 = always). The higher total scores of factors indicate increasingly obvious parenting modes. In this study, the Cronbach's α values associated with the three dimensions were 0.945, 0.823 and 0.915, respectively. The Cronbach's α of the whole questionnaire was 0.848.

Irrational Belief Survey (Ibs) Of University Students

In this study, the irrational belief survey (IBS) compiled for university students was used [29]. IBS mainly includes 15 questions in four dimensions including generalized comment, awful beliefs, absolute requirement and low tolerance to setbacks. The questionnaire used the 5-level scoring method. The higher score indicates stronger irrational beliefs (1 = strongly disagree and 5 = strongly agree). The Cronbach's α values associated with the four dimensions of the questionnaire were 0.841, 0.706, 0.802 and 0.731, respectively. The Cronbach's α of the whole questionnaire was 0.836.

School Adaptation Questionnaire

The Student Adaptation to College Questionnaire (SACQ) compiled by Baker and Siryk in 1984 is used mostly for the evaluation of factors associated with adaptability of university students as well as scale development [30, 31]. This questionnaire comprises 67 questions in four dimensions: academic adjustment, social adjustment, personal/emotional adjustment and general institutional attachment. Combined with research practices, this study compiled a Chinese Student Adaptation to College Questionnaire based on SACQ, which contains 25 questions in five dimensions, including academic pressure, learning motivations, interpersonal adaption, school adjustment and physical-psychological adjustment. The questionnaire used a 5-level scoring method. The higher score indicates stronger adaptation (1 = strongly disagree and 5 = strongly agree). The Cronbach's α values associated with the five dimensions were 0.841, 0.813, 0.789, 0.801 and 0.831, respectively. The Cronbach's α of the whole questionnaire was 0.815.

Data Processing

Mediating effect refers to the impact of independent variable X on the dependent variable Y through the intermediate variable M [32]. Statistical analysis of major variables was performed using SPSS24.0 and Amos24.0 programs. According to the results of deviation from the common method, there are 16 factors with characteristic root higher than 1. The variance interpretation rate of the first common factor was 25.6%, which was smaller than the critical value (40%), which suggests that the deviation was not significant.

Results

Correlation analysis of parenting mode, irrational beliefs and school adjustment factors

Descriptive statistical analysis

The significance of differences between major demographic variables was analyzed. As shown in Tables 2, 3 and 4, the perception of boys was weaker than that of girls regarding parenting mode. Girls were the most sensitive to emotional warm parenting mode. The emotionally warm and overprotective behaviors perceived by the only child in sa family were higher than in families with multiple children. Further, the perceptions of stay-at-home and partial stay-at-home children to rejection were higher than those of non-stay-at-home children.

Table 2
Significance of gender differences between major research variables (n = 510)

	1	2	3	4	5	6	7	8	9	10	11	12
Male	2.89 (0.65)	1.47 (0.46)	2.12 (0.40)	2.82 (0.73)	2.24 (0.71)	2.89 (0.73)	4.00 (0.65)	3.57 (0.67)	7.61 (1.96)	2.68 (0.65)	2.26 (0.73)	3.52 (0.62)
Female	2.93 (0.67)	1.41 (0.47)	2.05 (0.44)	2.69 (0.67)	2.21 (0.69)	3.00 (0.71)	4.60 (0.20)	3.66 (0.63)	7.70 (2.00)	2.76 (0.65)	2.36 (0.76)	3.48 (0.61)
t	-0.63	1.76	1.82	2.00	0.45	-1.16	-3.5	-1.67	-0.46	-1.52	-1.49	0.64
Notes: $p < 0.05$ (bilateral test). Numbers in brackets denote standard deviations and numbers out of brackets represent means. 1 = emotionally warm parenting mode; 2 = rejection; 3 = overprotection; 4 = summary comments; 5 = awful beliefs; 6 = absolute requirements; 7 = low tolerance to setbacks; 8 = learning motivation; 9 = learning pressure; 10 = interpersonal adaptation; 11 = physical and psychological adjustment; 12 = school adjustment. The standard deviation is in the bracket and the mean value is outside the bracket.												

Table 3
Significance of differences in major variables between only-child and non-only-child families (n = 510)

	1	2	3	4	5	6	7	8	9	10	11	12
Only child	3.06 (0.68)	1.42 (0.48)	2.12 (0.43)	2.83 (0.68)	2.26 (0.65)	3.08 (0.69)	4.10 (0.53)	3.60 (0.56)	7.52 (1.96)	2.61 (0.75)	2.25 (0.73)	3.58 (0.60)
Not only child	2.86 (0.65)	1.45 (0.46)	2.07 (0.42)	2.72 (0.71)	2.21 (0.71)	2.91 (0.72)	4.11 (0.66)	3.62 (0.68)	7.70 (1.99)	2.76 (0.67)	2.33 (0.75)	3.47 (0.61)
t	2.74	-0.51	1.21	1.41	0.72	2.22	-0.12	-0.32	-0.88	-2.29	-1.05	1.61

Note: $p < 0.05$ (bilateral test). Numbers in brackets represent standard deviations and numbers outside brackets are means. 1 = emotionally warm parenting mode; 2 = rejection; 3 = overprotection; 4 = summary comments; 5 = awful beliefs; 6 = absolute requirements; 7 = low tolerance to setbacks; 8 = learning motivation; 9 = learning pressure; 10 = interpersonal adaptation; 11 = physical and psychological adjustment; 12 = school adjustment. The standard deviation is in the bracket and the mean value is outside the bracket.

Table 4
Significance of differences in major variables between stay-at-home and rest of the children (n = 510)

	1	2	3	4	5	6	7	8	9	10	11	12
Half	2.51 (0.58)	1.58 (0.48)	2.03 (0.35)	2.78 (0.75)	2.44 (0.89)	2.91 (0.80)	4.10 (0.65)	3.38 (0.67)	7.83 (1.84)	2.87 (0.76)	2.54 (0.74)	3.36 (0.62)
Complete	2.67 (0.67)	1.60 (0.65)	2.08 (0.42)	2.69 (0.91)	2.35 (0.85)	3.06 (0.77)	4.04 (0.86)	3.44 (0.63)	7.81 (2.48)	2.97 (0.69)	2.45 (0.99)	3.47 (0.79)
No	2.97 (0.66)	1.41 (0.45)	2.08 (0.41)	2.74 (0.68)	2.18 (0.66)	2.95 (0.71)	4.11 (0.61)	3.65 (0.64)	7.63 (1.97)	2.69 (0.63)	2.27 (0.73)	3.51 (0.60)
f	12.99	4.33	2.28	0.11	3.59	0.34	0.12	4.93	0.31	3.44	3.33	1.66
Note: $p < 0.05$ (bilateral test). Numbers in brackets are standard deviations and numbers out of brackets represent means. 1 = emotionally warm parenting mode; 2 = rejection; 3 = overprotection; 4 = summary comments; 5 = awful beliefs; 6 = absolute requirements; 7 = low tolerance to setbacks; 8 = learning motivation; 9 = learning pressure; 10 = interpersonal adaptation; 11 = physical and psychological adjustment; 12 = school adjustment. The standard deviation is in the bracket and the mean value is outside the bracket.												

Pearson correlation analysis of variables adjusted for gender, single child and stay-at-home children was carried out. As shown in Table 5, the results suggest that emotionally warm parenting mode was negatively correlated with irrational beliefs (summary comments, awful beliefs and low tolerance to setbacks), but positively related with learning motivation, interpersonal adaptation and physical and psychological adjustment. Therefore, H1 is verified. The rejection parenting mode was negatively related with absolute requirements, but positively with summary comments, awful beliefs and low tolerance to setbacks. Besides, rejection was negatively correlated with learning motivation, interpersonal adaptation and physical and psychological adjustment, but positively correlated with learning pressure and school adjustment. Overprotection was negatively correlated with absolute requirements, but positively correlated with summary comments, awful beliefs and low tolerance to setbacks. Overprotection was negatively correlated with interpersonal adaptation, but positively associated with learning motivation, learning pressure, physical and psychological adjustment and school adjustment. Hence, H2 is verified.

Table 5
Correlation analysis of parenting mode, irrational beliefs and adaptability of university students (n = 510)

	1	2	3	4	5	6	7	8	9	10	11	12
1	1.00	-0.426**	-0.015	-0.334**	-0.108*	0.084	-0.153**	0.273**	-.248**	0.280**	0.091*	-0.285**
2	-0.426**	1.00	0.459**	0.371**	0.234**	-0.143**	0.156**	-0.157**	0.179**	-0.283**	-0.083	0.333**
3	-0.015	0.459**	1.00	0.130**	0.209**	-0.042	0.150**	0.020	0.092*	-0.042	0.039	0.151**
4	-0.334**	0.371**	0.130**	1.00	0.548**	-0.061	0.630**	-0.093*	0.479**	-0.289**	-0.038	0.527**
5	-0.108*	0.234**	0.209**	0.548**	1.00	0.161**	0.439**	-0.005	0.259**	-0.130**	0.047	0.327**
6	0.084	-0.143**	-0.042	-0.061	0.161**	1.00	0.176**	0.295**	-0.005	0.288**	0.109*	-0.096*
7	-0.153**	0.156**	0.150**	0.630**	0.439**	0.176**	1.00	0.044	0.424**	-0.075	-0.014	0.322**
8	0.273**	-0.157**	0.020	-0.093*	-0.005	0.295**	0.044	1.00	-0.112*	0.428**	.0344**	-0.104*
9	-0.248**	0.179**	0.092*	0.479**	0.259**	-0.005	0.424**	-0.112*	1.00	-0.205**	-0.088*	0.521**
10	0.280**	-0.283**	-0.042	-0.289**	-0.130**	0.288**	-0.075	0.428**	-0.205**	1.00	0.422**	-0.331**
11	0.091*	-0.083	0.039	-0.038	0.047	0.109*	-0.014	0.344**	-0.088*	0.422**	1.00	-0.075
12	-0.285**	0.333**	0.151**	0.527**	0.327**	-0.096*	0.322**	-0.104*	0.521**	-0.331**	-0.075	1.00

Note: ** is on the 0.01 level (two-tailed) indicates significant correlation. * is on the 0.05 level (two-tailed) suggests significant correlation. 1 = emotionally warm parenting mode; 2 = rejection; 3 = overprotection; 4 = summary comments; 5 = awful beliefs; 6 = absolute requirements; 7 = low tolerance to setbacks; 8 = learning motivation; 9 = learning pressure; 10 = interpersonal adaptation; 11 = physical and psychological adjustment; 12 = school adjustment.

Mediating Effect Of Irrational Beliefs

In this study, parenting mode was used as the independent variable, while emotionally warm, overprotective and rejecting types were used as indices. Further, irrational beliefs including summary comments, awful beliefs and low tolerance to setbacks as well as maladaptation were included in the mediation model for analysis. The simulation fitting result is relatively good: ($\chi^2/df = 2.098$, NFI = 0.932, GFI = 0.956, CFI = 0.956, IFI = 0.963, RMSEA = 0.046, srmr = 0.029, tli = 0.952). The standardization model of mediating effects based on pathway analysis is presented in Fig. 1.

Table 6
Bootstrap analysis of mediating effect of parenting mode on adaptability of university students

Effect	Standardization effect	95%ci	
		Lower limit	Upper limit
Overprotection → general effect of adaptability of university students	0.189	0.073	0.224
Overprotection → direct effect of adaptability of university students	-0.099	-0.594	0.085
Overprotection → irrational beliefs→ indirect effect of adaptability of university students	0.170	0.017	0.774
Rejection → general effect of adaptability of university students	0.351	0.201	0.561
Rejection → direct effect of adaptability of university students	0.321	-0.045	0.556
Rejection → irrational beliefs → indirect effect of adaptability of university students	0.271	0.141	0.532

A total of 1000 Bootstrap samples were analyzed using the bootstrap method and the 95% confidence interval was selected to determine the general, direct and indirect mediating effects (Table 6). In the general effect of overprotection on adaptability of university students,

the lower and upper limits of the Bootstrap confidence interval were 0.189 and 0.224, excluding 0. Hence, the general effect is true. The lower and upper limits of Bootstrap confidence interval of direct effect were - 0.594 and 0.085, respectively, including 0. Hence, the direct effect is false. For the mediating effect of irrational beliefs (low tolerance to setbacks, awful beliefs and absolute requirements), the lower and upper limits of bootstrap confidence interval were 0.017 and 0.774, respectively, excluding 0. Therefore, the mediating effect is true. For the general effect of rejection parenting mode on adaptability of university students, the lower and upper limits of the Bootstrap confidence interval were 0.201 and 0.561, respectively, excluding 0. Hence, the general effect is true. The lower and upper limits of Bootstrap confidence interval of direct effect were - 0.045 and 0.556, respectively, including 0, suggesting no direct effect. For the mediating effect of irrational beliefs (low tolerance to setbacks, awful beliefs and absolute requirements), the lower and upper limits of bootstrap confidence interval were 0.141 and 0.532, respectively, excluding 0, which indicates that the mediating effect is true. In summary, irrational beliefs such as low tolerance to setbacks, awful beliefs and absolute requirements mediate the effects on school adjustment, thereby validating hypothesis H3.

Discussion

The results suggest that negative parenting modes including overprotection and rejection are associated with irrational beliefs awful beliefs, summary comments and absolute requirements. The combination of parenting attitudes, emotional expression and parenting behaviors enhance parent-child interaction during development [33]. Thus, the parenting mode determines the conceptual and behavioral changes in children during growth and development of individual values. It is difficult to provide rational training if parents are overprotective, rejecting and crude, or criticize and control children unduly, and lack acceptance, understanding, forgiveness or respect for their children. Negative parenting modes can inculcate extreme and one-sided concepts in children, such as “any mistake will lead to serious consequences” and “I will be laughed at for mistakes”. These concepts will be solidified consciously and children find it difficult to accept individual failures and setbacks, resulting in irrational beliefs.

According to Bronfenbrenner, the microsystem, intermediate external system, and macrosystem represent a complete hierarchical system around individuals. Individual represents the core of the system and family is an important component of microsystem [34]. Parents are the first teachers of children and are important initial contacts. Family is the first site of individual socialization and represents the most direct and specific microenvironment for individual growth. It is an important element in individual adaptation [35]. As a structural system, family is an important place in childhood socialization. Each member is an important structural component and plays a unique role in the family [36]. Individuals learn social norms, cultural values and behavioral modes in families, while parents influence socialization of children via parenting mode [37]. Thus, the student behaviors reflect the parenting mode. University students are in early developmental stage of life, leaving families behind and facing a new living and learning environment. Arnett [38] also designated it as early adulthood characterized by individual instability, inadequate self-identity, self-concern, developmental transition and various possibilities. According to the eight-stage theory of personality development proposed by Erickson, university students are in the stage of transition from puberty to early adulthood. While insisting on self-identity, university students are eager to search for intimate relations with others and are extremely easy to exhibit maladaptation in interpersonal communication and psychological anxiety as well as discomfort [39]. Data suggest that parents and children are equally warm emotionally and children are provided with increasing number of opportunities for expression. Under such a parenting mode, children develop ability for empathy [40]. Following admission to the university, children from emotionally secure families develop good interpersonal relations. However, children experiencing overprotection and rejection often remain emotionally insecure and dependent, thus developing irrational beliefs such as absolute requirements. These children manifest maladaptation. University students in puberty are free from strict parental supervision and punishment, which decreases negative emotional experience. Besides, these students experience individual independence differently and the new connections with classmates and teachers increase their positive emotional experience. A decrease in negative emotional experiences with a concomitant increase in positive emotions facilitates adaptation of freshmen to campus environment, which is consistent with resource substitution theory and the law of conservation of energy [41]. Therefore, universities have an obligation to provide students with sufficient positive emotional experience upon admission, establish an all-inclusive teaching environment, increase their sense of acquisition and values, and improve self-reliance in individuals coping with difficulties and setbacks. The stronger the individual self-reliance, the more likely it is to develop acceptable behaviors for improved adaptability at the university level [42].

This study also found that irrational beliefs including poor tolerance to setbacks, awful beliefs and absolute requirements strongly mediate the relationship between negative parenting modes (overprotection and rejection) and maladaptation (insufficient learning motivation and poor interpersonal adaptation) of university students. This finding suggests that overprotection and rejection inculcates strong irrational beliefs. The study demonstrated that belief is an important factor influencing individual emotion and behavior. Many negative emotions and unhealthy psychological states are directly associated with irrational beliefs. As a result, students with profound

and irrational beliefs easily experience adverse emotions compared with other students, resulting in academic difficulties and tense interpersonal relations. This mechanism of parenting mode contributes to maladaptation of university students observed in this study, suggesting that negative parenting mode does not directly influence the adaptability of university students, but contributes to their irrational beliefs. According to social cognitive theory of Bandura [43], self-cognition is influenced by individual attribution patterns, emotional and physiological responses, and the effects of others and verbal persuasion. Students' irrational beliefs are mostly shaped by the past and emotional as well as psychological experiences. Children experiencing parental overprotection and rejection exhibit problems associated with interpersonal adaptation. University students who leave their parents behind have neither stable values nor well-developed self-cognition. This stage is an important element in strengthening students' self-support system, shedding negative family influences gradually and establishing strong adaptability [44]. According to the social support theory, individuals can avoid negative effects of stress by receiving psychological and emotional support as needed [45]. Supportive behaviors of others not only help individuals physically and psychologically in daily life, but also lower subjective evaluation of individuals during severe crisis under stressful events. Therefore, schools can provide students with an established support system. For interpersonal adaptation, universities should focus on the management of different problems faced by different students and provide appropriate counseling and interventions. Universities should facilitate mutual assistance since communication and exchange among students are easier to create a strong atmosphere for interpersonal relations. To ensure psychological and self-adaptation, universities should provide a platform for diversified training and development, encourage students to set their own goals and independently chart out their careers. Universities should encourage different types of club activity, strengthen construction of a second classroom for students, provide multiple avenues for social interaction and arts and sports activities. Teachers can offer friendly support and assistance, ideological counseling and psychological guidance and thereby reinforce the university support system, strengthen the positive emotional experience and reduce the impact of irrational beliefs. Thus, the adaptability of university students can be improved [46].

This study suggests that irrational beliefs such as low tolerance to setbacks, awful beliefs and absolute requirements have a significantly positive correlation with maladaptation including insufficient learning motivation and poor interpersonal adaptation among university students. Personality is an inherent individual trait comprising a combination of stable and unique psychological qualities formed via interaction between genetics and environment. Individual hallmarks of personality include cognition, emotion and behavior [47]. The concept of individual cognition explains the formation and development of personality. Irrational beliefs can contribute to personality traits such as maladaptation among university students. Maladaptive behaviors can be generated by individual intolerance to setbacks or difficulties, or sheer pessimism [48]. Therefore, universities should evaluate students' parenting modes using surveys before beginning of term and then design different management strategies accordingly for accurate management, and improve management level and quality continuously. First, universities must accept students unconditionally, including their strengths and weaknesses. Second, universities should contribute to emotional experiences positively based on rational emotional therapy [49]. For example, universities can assist students with exploration of their potential positive emotions and strengths, promote development of positive qualities. They can facilitate exploration of personal values by establishing positive interpersonal relationships, setting up an accurate view of life, to inculcate the sense of success, formulate and realize goals based on their strengths. Thus, students can develop positive self-cognition.

Strengths And Limitations

This study provides a few standard recommendations to prevent and improve maladaptation of university students. In addition to developing positive parenting modes, parents need to establish robust relationship with children, create a warm, ordered, respectful and tolerant family atmosphere, and avoid crude one-way communication. Universities should strengthen connections with families, enhance parental counseling and communication skills. In particular, parents with poor relations with children are encouraged to participate in relevant professional counseling programs to provide change and support. Finally, schools should alter students' irrational beliefs by strengthening the support system and rational emotional behavioral interventions to reduce maladaptation.

This study still has some limitations. First, it does not provide insights into causal relationships between variables since it uses cross-sectional data. Second, data were collected from self-reports of students. Further studies with improved experimental design are needed to increase the accuracy of results. Third, this study did not distinguish the parenting modes of father and mother and their effects on maladaptation, suggesting the need for further studies.

Conclusions

A few major conclusions of the study are as follows:

(1) Parenting mode can influence adaptability of university students.

(2) Emotionally warm parents strengthen the adaptability of university students. By contrast, negative parenting modes such as overprotection and rejection inculcate irrational beliefs, resulting in maladaptation of university students.

Declarations

Ethics approval and consent to participate

This study was conducted according to the Declaration of Helsinki and relevant policies in China. The study protocol was approved by the ethics committee of Guangdong Ocean University. The written form approval from relevant officials was obtained. The written informed consent had been obtained from the parents or guardians on behalf of the adolescents to participate in the research. Before administering any study-related questionnaires, all participants also signed an informed consent form.

Consent for publication

Not applicable.

Availability of data and materials

Data may be subject to third-party rights and restrictions. The data sets used and/or analyzed in the present study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that there are no competing interests.

Funding

The design of the study and the collection of data are supported by the Guangdong Provincial first-class undergraduate specialty construction project (JGTH[2019]No.46). The analysis and interpretation of data, as well as publication of the paper are supported by the 2020 new agricultural science research and reform practice project of the Ministry of Education (JGTH[2020]No.20) and the Scientific research fund project of Yunnan Provincial Department of Education (2022j0972).

Authors' contributions

KH made substantive intellectual contributions to the design of the study, collection, analysis and interpretation of data and drafting the manuscript. XHW was involved in design of the study, analysis and interpretation of data. DYJ and WXF made outstanding contributions to the collection of data. ZW provided help to the design of the study, the interpretation of data, draft and revision of the manuscript. All authors read and approved the final manuscript.

Acknowledgments

We sincerely thank the great contributions of the study participants and the staffs who assisted with data collection in this research. Also, we are grateful to the adolescents' teachers and parents for their supports.

Authors' information

¹Guangdong Ocean University, Zhanjiang 524088, Guangdong Province, People's Republic of China.

²Zhaotong University, Zhaotong 657000, Yunnan Province, People's Republic of China.

References

1. Vandenbos GR. APA Dictionary of Psychology (2nd ed.). Washington: American Psychological Association; 2015.
2. Chen F. A survey on adaptability of freshmen in general undergraduate colleges: a study based on the case of Fuqing Branch of Fujian Normal University and its countermeasures. J Fuqing Branch Fujian Norm Univ. 2013; 3: 47–52.

3. Li Xy, Wang Yz, Wang Wx. Research on the adjustment of freshman and its influence factors. *China J Health Psychol.* 2009; 17: 1354–1356.
4. Lu sz, cheng sh. research initially into the adaptable problems of freshmen. *J Hubei Univ.* 2004; 31: 230–233.
5. Watson JC. Native American racial identity development and college adjustment at two year institutions. *J Coll Couns.* 2009; 12: 125–36.
6. Bi CH, Yao YH, Chen ZT. Relation between personality, family interpersonal dynamics and students'adaption to college. *Chin Ment Health J.* 2015; 4: 316–320.
7. Zhu LY, Li J, An empirical study on college freshmens'adaptation and its influence factors. *J Northeast Univ.* 2015; 17: 416–421.
8. Credé M, Niehorster S. Adjustment to college as measured by the student adaptation to college questionnaire: a quantitative review of its structure and relationships with correlates and consequences. *Educ Psychol Rev.* 2012; 24:133–165.
9. Mandelco, Barbara L, Peery, Craig J. An organizational framework for conceptu-alizing resilience in children. *J Child Adol Ps Nurs.* 2000; 13: 99–111.
10. Belsky J, Steinberg L, Draper P. Childhood experience, interpersonal development, and reproductive strategy: an evolutionary theory of socialization. *Child Dev.* 1991; 62: 647–670.
11. Darling N, Steinberg L. Parenting style as context: an integrative model. *Psychol Bull.* 1993;113: 487 – 96
12. Zakeri H, Esfahani BN, Razmjoe M. Parenting styles and academic procrastination. *Procedia Soc Behav Sci.* 2013; 84: 57–60.
13. Arrindell WA, Sanavio E, Aguilar G, Sica C, Ende, J. The development of a short form of the EMBU: its appraisal with students in Greece, Guatemala, Hungary and Italy. *Pers Indiv Differ.* 1999; 27: 613–28.
14. Li J, Willems YE, Stok FM, Dekovic M, Bartels M, Finkenauer C. Parenting and self-control across early to late adolescence: a three-level meta-analysis. *Perspect Psychol Sci.* 2019; 14: 967–1005.
15. Ng-Knight T, Shelton KH, Riglin L, Mcmanus IC, Frederickson N, Rice F. A longitudinal study of self-control at the transition to secondary school: considering the role of pubertal status and parenting. *J Adolescence.* 2016; 50: 44–55.
16. Wang LX, Zhang LY, Chang SM,Ninth-Graders. Families'Socioeconomic Status and Their Learning Engagement: The Multiple Mediating Effects of Parental Expectations for Education and Parenting Styles,Chinese Journal of Special Education (Monthly) 12th Issue, 2018, Serial No. 222.
17. Baardstu S, Karevold EB, Soest TV. Childhood antecedents of agreeableness: A longitudinal study from preschool to late adolescence. *J Res Pers.* 2016; 67: 202–214.
18. Li DP, Zhang W, Li LD, Wang YH, Zhen SJ. The effects of parenting styles and temperament on adolescent aggression: examining unique, differential, and mediation effects. *Acta Psychol Sinica.* 2012, 44: 211–225.
19. Klein EM, Elmar B, Katja P, Tibubos AN, Mareike E, Jrg W, et al. The association between recalled parental rearing behavior and depressiveness: a comparison between 1st immigrants and non-Immigrants in the population-based Gutenberg health study. *BMC Psychiatry.* 2020; 20: 367.
20. Balan R, Dobrean A, Roman GD, Balazsi R. Indirect effects of parenting practices on internalizing problems among adolescents: the role of expressive suppression. *J Child Fam Stud.* 2017; 26: 40–47.
21. Yap MBH, Jorm AF. Parental factors associated with childhood anxiety, depression, and internalizing problems: a systematic review and meta-analysis. *J Affect Disorders.* 2015; 175: 424–440.
22. Marcone R, Affuso G, Borrone A. Parenting styles and children's internalizing-externalizing behavior: the mediating role of behavioral regulation. *Curr Psychol.* 2017; 39: 13–24.
23. Nishikawa S, Sundbom E, Hägglöf B. Influence of perceived parental rearing on adolescent self-concept and internalizing and externalizing problems in japan. *J Child Fam Stud.* 2010; 19: 57–66.
24. David D, Schnur J, Belloiu A. Another search for the "hot" cognitions: appraisal, irrational beliefs, attributions, and their relation to emotion. *Journal of Rational-Emotive and Cognitive-Behavior Therapy,* 2002; 20: 93–131.
25. Bayram N, Bilgel N. The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Soc Psych Psych Epid.* 2008; 43: 667–672.
26. Leung JTY, Shek DTL. Family functioning, filial piety and adolescent psycho-social competence in Chinese single-mother families experiencing economic disadvantage: implications for social work. *Brit J Soc Work.* 2015; 46: 1–19.
27. Sonogo M, Llácer A, Galán I, Simón F. The influence of parental education on child mental health in Spain. *Qual Life Res.* 2013; 22: 203–211.

28. Jiang J. Revision of the short-form egna minnen av barndoms uppfostran for Chinese. *Psychol Dev Educ.* 2010; 26: 94–99.
29. wang Y. Prediction of college students' irrational beliefs on their post-earthquake stress response [D]. Sichuan Normal University, Sichuan; 2009.
30. Baker RW, Siryk B. Measuring adjustment to college. *J Couns Psychol.* 1984; 31:179–189.
31. Baker RW. Student Adaptation to College Questionnaire (SACQ): Manual. Los Angeles: Western Psychological Services; 1989.
32. Selig JP, Preacher, KJ. Mediation models for longitudinal data in developmental research. *Res Hum Dev.* 2009; 6: 144–164.
33. Higgins ET, Silberman I. Development of regulatory focus: Promotion and prevention as ways of living. In J. Heckhausen & C. S. Dweck (Eds.), *Motivation and self-regulation across the life span* (pp.78–113). New York: NY: Cambridge University Press; 1998.
34. Bronfenbrenner U. *The ecology of human development: experiments by nature and design.* Cambridge: Harvard University Press; 1997.
35. Barnes J, Katz I, Korbin J, O'Brien M. *Children and families in communities: theory, research, policy and practice.* Hoboken: John Wiley & Sons, Inc.; 2006.
36. Parents T. The social structure of the family; 2022. p.173–201
37. Crusec JE, Lytton H. Socialization and family, in *social development: history, theory, and research.* Springer New York; 1988. P. 161–212.
38. Arnett PA, Randolph JJ. Longitudinal course of depression symptoms in multiple sclerosis. *J Neurol Neurosur Ps.* 2006; 77: 606–610.
39. Erikson EH. *Childhood and society.* New York: Norton; 1950.
40. Maxwell A, Reay RE, Huber A, Hawkins E, Woolnough E, McMahon C. Parent and practitioner perspectives on Circle of Security Parenting (COS-P): A qualitative study. *Infant ment health J.* 2021; 42: 452–468.
41. Ross CE, Mirowsky J. Sex differences in the effect of education on depression: resource multiplication or resource substitution? *Soc Sci Med.* 2006; 63:1400–1413.
42. Bandura, A. Self-efficacy mechanism in human agency. *Am Psychol.* 1982; 37: 122–147.
43. Bandura, A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychol Rev.* 1977; 2: 191–215.
44. Lin N. *Social support, life events and depression.* FL: Academic Press; 1986.
45. Cobb S. Social support as moderator of life stress. *Psychosom Med.* 1976; 38: 300–314.
46. Cheng ZJ. Peer assistance: a new way to transform the paradigm of school education. *Explor Higher Edu.* 2015; 3: 27–30.
47. Krakau L, Tibubos AN, Beutel ME, Ehrental JC, Gieler U, Brähler E. Personality functioning as a mediator of adult mental health following child maltreatment. *J Affect Disorders.* 2021; 291: 126–134.
48. Wei R, liu D. Research on children's attachment and family rearing style from the perspective of intellectualization. *J China Youth Univ Politics.* 2014, 33: 29–32.
49. Ellis A. *Rational Emotive Behavior Therapy Today.* Newyork: lyle stuart; 1999.

Figures

Figure 1

Mediating effect of irrational beliefs on the relationship between parenting mode and adaptability of university students