

## The Impact of Student Safety Education on Safety Awareness of Early Childhood Education Majors at Yunnan Open University, Yunnan, China

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### Abstract

This study aims to examine the level of safety awareness among Early Childhood Education majors at Yunnan Open University, identify key factors influencing safety education, and propose strategies for improving safety education. The research utilized a survey questionnaire to assess students' perceptions of safety education. The data were analyzed using mean scores and standard deviations.

The findings revealed that the overall safety awareness level among students was moderate, with specific areas such as safety education perception (M=2.59), safety awareness culture (M=2.58), and personal safety awareness (M=2.55) indicating that safety education and activities were insufficient for fostering high levels of awareness. Furthermore, the relevance of safety education content, particularly concerning fire prevention and accident response, was identified as a key factor influencing students' safety awareness. Based on the results, several recommendations were made to improve safety education, including increasing the frequency and depth of safety training, encouraging self-reflection and peer-to-peer learning, and conducting more practical safety drills (e.g., fire, earthquake, and accident drills). Additionally, fostering a stronger safety culture through continuous promotion and open communication between students and faculty was suggested. Implementing these strategies is expected to enhance students' safety awareness and preparedness, ultimately creating a safer and more proactive learning environment.

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## Introduction

In today's fast-changing world, the safety of university students has become a pressing concern. With the rapid development of technology, urbanization, and societal complexity, students are increasingly exposed to various risks, including online fraud, campus bullying, traffic accidents, and the impacts of natural disasters (Wang, J. 2024). These incidents not only jeopardize students' physical and mental well-being but also disrupt their academic performance and overall quality of life (Kutsyuruba, B., Klinger, D. A., and Hussain, A. 2015). Alarming, research indicates that many university students lack sufficient safety awareness and exhibit limited coping skills when confronted with sudden safety emergencies (Liu & Zhang, 2019).

Given these challenges, the role of higher education institutions in fostering a robust and comprehensive safety education system has become more critical than ever. Universities are uniquely positioned to equip students with the knowledge, attitudes, and practical skills necessary to navigate safety risks and enhance their self-protection capabilities (Wang, Z., Han, Z., and Li, Y. (2023). This is particularly essential for students majoring in Early Childhood Education, who are not only responsible for their own safety but will also shape the safety practices and awareness of young children in the future. This research focuses on Early Childhood Education majors at Yunnan Open University in Yunnan, China, with the goal of assessing their current level of safety awareness and identifying factors that influence the effectiveness of safety education. A total of 270 students were surveyed, yielding 165 valid responses, with the sample size determined using Taro Yamane's formula (Yamane, 1973). By examining students' perceptions, behaviors, and knowledge related to safety, the study seeks to provide practical recommendations for enhancing safety education within higher education.

Ultimately, this research aims to offer valuable insights for improving the structure and implementation of safety education programs, contributing to both the academic success and personal well-being of university students. In doing so, it also underscores the broader importance of integrating safety education as a core component of higher education curricula to better prepare students for the challenges of an increasingly complex and unpredictable world.

## Research Objectives

1. To analyze the current state of safety awareness among Early Childhood Education majors at Yunnan Open University.
2. To investigate key factors influencing student safety education.
3. To propose strategies for optimizing student safety education.

## Research Methodology

To gain a comprehensive understanding of safety awareness among Early Childhood Education students at Yunnan Open University, this research employs a systematic approach designed to ensure accuracy, reliability, and meaningful insights. The methodology is divided into four key components:

**1. Population and Sample:** The target population for this study consists of all 270 students enrolled in the Early Childhood Education program at Yunnan Open University. To obtain a representative sample, Taro Yamane's formula was employed, resulting in a sample size of 165 students with a 95% confidence level. Random sampling was used to ensure an unbiased selection of participants, with approximately 55 students from each academic year (first to third year) participating in the survey. This diverse sampling approach aims to capture a balanced perspective on safety awareness across different stages of the students' academic journey.

**2. Research Instruments:** The primary research tool utilized in this study is a structured questionnaire, carefully designed to explore the key dimensions of students' safety awareness. The questionnaire covers three core areas: 1) Current State of Safety Awareness: Assessing students' knowledge, attitudes, and behaviors related to personal safety. 2) Influencing Factors: Identifying variables such as prior safety education, personal experiences, and access to safety resources that may impact students' awareness. 3) Recommendations for Improvement: Gathering student perspectives on strategies to enhance safety education programs.

The questionnaire employs a five-point Likert scale, with responses ranging from "1" (Strongly Disagree) to "5" (Strongly Agree), to measure the degree of agreement on various statements related to safety awareness and education.

**3. Data Collection:** Data collection was conducted through a carefully managed questionnaire distribution process. Students were briefed on the research objectives and the confidentiality of their responses to encourage honest and thoughtful participation. The survey was administered both in person and online to

maximize response rates and accommodate students with different preferences and schedules. The process was carried out over a two-week period, ensuring sufficient time for all selected participants to complete the questionnaire.

**4. Data Analysis:** The collected data were analyzed using SPSS statistical software to ensure robust and scientifically sound findings. A range of statistical techniques was employed, including:

4.1 Descriptive Statistics: Used to summarize the data and provide an overview of students' safety awareness levels. Measures such as frequency, percentage, mean, and standard deviation were calculated to highlight key trends.

4.2 Inferential Analysis: Employed to explore relationships between different variables and assess the impact of demographic factors (e.g., age, gender, academic year) on students' safety awareness.

4.3 Reliability Testing: Cronbach's alpha coefficient was used to evaluate the internal consistency of the questionnaire, ensuring the reliability of the measurement tool.

This multifaceted analytical approach not only enhances the depth of the findings but also strengthens the validity and reliability of the research, providing a solid foundation for actionable recommendations aimed at improving student safety education at Yunnan Open University.

## Research

This section presents the findings of the study based on the three main research objectives:

1. Analysis of the Current State of Safety Awareness among Early Childhood Education Majors at Yunnan Open University The survey results reveal that the current level of safety awareness among Early Childhood Education students at Yunnan Open University is insufficient, as reflected in the overall mean scores. Key findings include the following:

current state of safety awareness among Early Childhood Education majors at Yunnan Open University	$\bar{X}$	S.D.	Level of implementation
1. Perception of Safety Awareness Education	2.59	1.03	moderate
2. Safety Awareness Culture:	2.58	1.04	moderate
3. Personal Safety Awareness	2.55	1.04	moderate
4. Comprehensiveness of Safety Education	2.80	1.10	moderate
<b>total</b>	<b>2.48</b>	<b>.409</b>	<b>moderate</b>

Table 1 Current State of Safety Awareness among Early Childhood Education Majors at Yunnan Open University

The research findings indicate the following causes and effects: 1. Perception of Safety Awareness Education: With a mean score of 2.59 (SD=1.03), many students believe that the frequency of safety education provided by the university, including topics such as fire safety, accident prevention, and fraud awareness, is inadequate. 2. Safety Awareness Culture: The mean score of 2.58 (SD=1.04) indicates that the students find the school's efforts to foster a culture of safety awareness (e.g., safety publicity and communication) lacking. 3. Personal Safety Awareness: Students' self-assessment of their personal safety awareness also shows room for improvement, with a mean score of 2.55 (SD=1.04). 4. Comprehensiveness of Safety Education: While slightly higher, the mean score of 2.80 (SD=1.10) suggests that students feel the safety education provided by the school is not yet comprehensive enough to address all key safety concerns. 5. Sufficiency of Safety Drills: The mean score of 2.62 (SD=1.06) reflects that students do not believe the frequency or scope of the school's safety drills is adequate.

Overall, these findings highlight the need for a more robust and consistent safety education system to enhance students' safety awareness and preparedness.

## 2. Key Factors Influencing Student Safety Education

The analysis identifies several key factors that significantly impact the effectiveness of student safety education at Yunnan Open University: 2.1) Content of Safety Education: The most critical factor influencing safety awareness is the relevance and comprehensiveness of the safety education content provided by the university, including fire prevention, accident response, and fraud prevention knowledge. 2.2) Implementation of Safety Measures: The safety prevention measures adopted by the university, such as regular safety inspections, adequate

allocation of fire extinguishers, and provision of first-aid kits, are influential in shaping students' safety awareness. 2.3) Safety Facilities and Equipment: The construction and maintenance of safety facilities, such as alarm systems and surveillance cameras, play an essential role in promoting a safe learning environment. 2.4) Safety Drills and Management: Regular safety drills (e.g., fire drills, accident prevention exercises) and inspections are critical for reinforcing students' preparedness and response capabilities. 2.5) Student Engagement in Safety Activities: Encouraging students to participate in safety-related activities, such as sharing safety experiences, learning to use safety equipment (fire extinguishers and alarms), and identifying safety risks, helps enhance their proactive safety awareness.

### **3. Proposed Strategies for Optimizing Student Safety Education**

Based on the survey results, several strategies are recommended to optimize student safety education and improve safety awareness: 3.1 Enhancing Safety Awareness Training: 3.1.1) Increase the frequency and depth of safety education training sessions, focusing on risk identification, preventive measures, and accident handling. 3.1.2) Provide practical workshops to help students develop hands-on safety skills, such as using fire extinguishers and first-aid kits. 3.2 Encouraging Self-Reflection and Participation: 3.2.1) Motivate students to engage in self-reflection to identify potential safety problems, improve their safety skills, and develop action plans for dealing with safety incidents. 3.2.2) Promote peer-to-peer learning by encouraging students to share safety experiences, including safety skills, risk identification, and accident management. 3.3 Increasing the Frequency and Variety of Safety Drills: Conduct regular and varied safety drills (e.g., fire, earthquake, and accident drills) to enhance students' practical preparedness. 3.4 Strengthening the School's Safety Awareness Culture: 3.4.1) Foster a culture of safety awareness through continuous safety promotion using various media, such as posters, announcements, and broadcasting safety tips. 3.4.2) Enhance communication between students and faculty regarding safety-related issues to encourage an open dialogue on safety concerns and best practices.

By implementing these strategies, the university can create a safer and more proactive learning environment, ultimately strengthening students' safety awareness and preparedness to handle real-life safety incidents.

## Discussion

The results of this study provide valuable insights into the safety awareness of Early Childhood Education majors at Yunnan Open University. The findings demonstrate a clear gap in safety education and preparedness, which aligns with trends observed in previous research. This section discusses the implications of the findings and compares them with the existing literature.

1. Current State of Safety Awareness. The study revealed that the overall level of safety awareness among students is moderate, with mean scores indicating insufficiency in all aspects of safety education. This includes students' perceptions of the frequency of safety awareness education, the culture of safety awareness, and their personal safety awareness. These results are consistent with Billett, S. (2015) argument that safety education, particularly in higher education, often fails to integrate into students' everyday experiences. Without active engagement and contextualized learning, students struggle to translate theoretical knowledge into practical skills. This study found that more than half of the respondents (53.94%) felt their safety awareness was inadequate, supporting the notion that current safety education is not sufficiently interactive or impactful. The findings also reflect Helan, W., Jiang, Z. H. U., Zheng, Y., & Jun, T. (2014). concern regarding the underdeveloped public safety system in China. Zhao pointed out that public safety education, particularly in educational institutions, lacks comprehensiveness. The results of this study echo this sentiment, with students reporting that the safety education curriculum is insufficient, particularly in covering areas like fraud prevention and accident response. Therefore, there is a clear need to enhance the breadth and depth of safety education, ensuring that it covers a wide range of safety issues relevant to the students' everyday lives.

2. Key Factors Influencing Student Safety Education. The research identified several key factors influencing student safety education, with the most significant being the content of the safety education itself. The majority of respondents (64.85%) emphasized the importance of comprehensive and relevant safety content, including fire safety, accident prevention, and fraud awareness. This finding supports Zhu, T. T., & Zhang, Y. J. (2017). assertion that the existing safety education system in China is underdeveloped and requires a more comprehensive approach. Students expressed a need for more in-depth education on practical safety measures and emergency response strategies. Additionally, the study found that the

implementation of safety measures—such as regular safety inspections, fire extinguishers, and first-aid kits—plays a crucial role in shaping students' perceptions of safety. This is consistent with Chen, K. (2020). critique of higher education institutions in China, which face challenges such as outdated curricula and insufficient resources. He argued that safety education often fails to meet real-world demands due to a lack of systematic and comprehensive planning. In the context of Yunnan Open University, students indicated that safety drills, while important, were not conducted frequently or comprehensively enough to fully prepare them for potential safety emergencies.

3. Proposed Strategies for Optimizing Student Safety Education. The study suggests several strategies to improve safety awareness and education among students. The most widely supported recommendation, endorsed by 59.39% of respondents, is to increase the frequency and depth of safety education sessions. This finding aligns with the perspectives of Graham, B. A., (2024). who emphasized the importance of adapting safety education to contemporary challenges and regularly updating the curriculum to keep pace with new risks. Moreover, the research highlights the need for a more interactive and practical approach to safety training. Students expressed a desire for workshops that would allow them to develop hands-on skills, such as using fire extinguishers and first-aid kits. This suggestion aligns with constructivist teaching principles, as proposed by Austin, E. W. (2006), which advocate for experiential learning that allows students to actively engage with safety concepts and practices in real-world scenarios. Another significant recommendation is fostering a stronger safety culture within the university. Many students suggested that the school should utilize diverse channels—such as posters, announcements, and digital media—to regularly promote safety awareness. This is supported by the literature, which emphasizes the importance of continuous safety promotion to create an environment where safety becomes ingrained in daily life (Taylor, E. (2000). Finally, peer-to-peer learning and self-reflection were identified as vital strategies for improving safety awareness. Encouraging students to share safety experiences and engage in self-reflection can foster a deeper understanding of safety risks and personal responsibility. These strategies, which are rooted in constructivist learning, not only enhance safety awareness but also empower students to take proactive measures in safeguarding themselves and others.

Conclusion, The findings of this research underscore the importance of a comprehensive, practical, and culturally embedded approach to safety education in higher education. By addressing the key factors identified—such as the content of safety education, the implementation of safety measures, and the fostering of a safety-conscious culture—Yunnan Open University can significantly enhance the safety awareness and preparedness of its students. The study’s recommendations, if implemented, could serve as a model for other institutions seeking to improve their safety education programs. By aligning safety education with students’ real-world needs and engaging them in interactive, reflective learning processes, universities can play a crucial role in developing a safer and more aware student body.

### New Knowledge Contribution

This study applies safety education and management theories to conduct an in-depth analysis of key elements in university safety education. It constructs a multi-dimensional framework of factors influencing student safety awareness, enriching research in the field of safety education. The study proposes specific recommendations enhancing safety education training, optimizing contextualized teaching, and improving safety facility construction, providing valuable insights for university safety management and policy development.

The issue of student safety awareness is not solely the responsibility of schools or families. It requires the joint participation of schools, families, individuals, and society as a whole.



Figure 1 Knowledge Framework from the Research

## Conclusion and Recommendations

The research reveals that the safety awareness among Early Childhood Education students at Yunnan Open University is currently insufficient, as evidenced by moderate mean scores across key areas, including perception of safety education (2.59), safety culture (2.58), personal safety awareness (2.55), and the comprehensiveness of safety education (2.80). Additionally, students feel that the frequency of safety drills (2.62) and the overall safety education system are inadequate. These findings highlight the need for an improved and consistent safety education program to better equip students with the necessary safety knowledge and skills.

The study also identifies several factors that impact the effectiveness of safety education, including the relevance and comprehensiveness of the content, the implementation of safety measures, the availability of safety facilities, and the frequency of safety drills. To optimize safety education, the research suggests strategies such as increasing the depth and frequency of safety training, promoting student engagement in safety activities, enhancing self-reflection, and fostering a strong safety awareness culture within the university. By adopting these recommendations, the university can create a safer learning environment and improve students' preparedness for real-life safety situations.

### 1. Recommendations for Future Researchers

1.1 Expand the scope of research: This study only focused on students in the Early Childhood Education program at Yunnan Open University, with a limited sample size. Future research should expand the sample to include more universities and majors to verify the generalizability of the findings.

1.2 Long-term tracking and evaluation: This study did not track and evaluate the long-term effects of the proposed improvement measures. Future research should include longitudinal studies to assess the effectiveness of safety education interventions over time.

### 2. Recommendations for Schools

2.1 Optimize safety education content: Schools should develop a systematic safety education training plan based on students' actual needs, incorporating human resource development theories. The curriculum should cover

psychological health, cybersecurity, campus violence prevention, and emergency response to public incidents.

2.2 Increase the frequency of safety education training and drills: Schools should ensure that students can acquire and apply safety knowledge and skills through regular practical training.

2.3 Introduce diverse teaching methods: Schools should adopt various teaching methods case studies, role-playing, and interactive discussions to increase student engagement and ensure they master the latest safety knowledge and emergency response skills.

2.4 Encourage students to engage in self-reflection and learning: By promoting self-reflection, students can better understand safety knowledge and apply it to real-life situations.

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