

Policy Frameworks for Comprehensive Risk Behavior Education Among Minors: A Multidimensional Approach to Sexual Health and Safety

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Abstract Sexuality, as an instinctive and basic human need, is an important part of the whole life cycle and a key topic at the stage of healthy development of minors. This paper observes the situation encountered in the development of sexual education for minors in the family, school and society. It analyzes the national law's view on the age of sexual consent of minors from the perspective of respecting and protecting the sexual rights of minors. Based on this, it proposes an optimization strategy for sex education for minors, namely, sex education for minors based on social-emotional learning theory. Further propose the optimization strategy and practice method of comprehensive sex education for minors based on social-emotional learning theory. Analyze the current cognitive level of minors' sexual cognition, sexual attitude and sexual behavior, and predict the prediction rate of the occurrence of risky sexual behavior. Comparative experiments are set up to analyze the realistic role of comprehensive sex education interventions. In the analysis of the incidence of risky sexual behaviors, the results of the comprehensive minors' incidence of risky sexual behaviors showed that for all kinds of risky sexual behaviors of minors, the number of males was higher than that of females. And male, age >16, migration experience, relationship experience, identification with extramarital sex, identification with one-night stand, identification with one-time sex without condom are the risk factors for sexual behavior.

Keywords: • sex education • risky sexual behavior • minors • social-emotional learning

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1 Introduction

At present, the number of minor population in China occupies a large proportion in the composition of the whole population, and the structural composition also presents a great deal of differentiated characteristics. And due to the influence of various factors, including economic level, education level, ideology, psychological quality, etc., their risky behaviors are becoming more and more diversified, which has become one of the common concerns of the current society (Underwood, 2020; Waid & Uhrich, 2020; Rodelli et al., 2018; Spruit et al., 2018). Minors, due to the special characteristics of this age stage, are prone to extremist and dangerous phenomena, which is detrimental to their own healthy growth and social stability, which requires a comprehensive analysis from all aspects, to take correct and reasonable improvement measures to improve their psychosocial coping ability and reduce the occurrence of undesirable social behaviors, so as to promote their healthy growth (Garrido, Weiler, & Taussig, 2018; Gagnon, Barber, & Soyuturk, 2018; Mathys, 2017).

From the perspective of risky behavior, minor risky behavior can be specifically divided into two categories, namely accidental injury and intentional injury. Accidental injury risky behavior is mainly belong to passive type, such as underage life common climbing, exploration, racing and so on behavior, or due to the influence of the natural environment under the influence of the unpredictable risky behavior (Kovensky, Anderson, & Leve, 2020; Hirschfield, 2018). Intentionally injurious risky behaviors mainly involve their own subjective will, including more extreme drug abuse, suicidal behavior, intentional injury behavior, illegal narcotics, etc., but also includes some more common hidden risky behaviors, such as smoking behavior, alcoholism, inappropriate weight loss behavior, and premature unsafe sex, etc. (Letourneau et al., 2017; Finigan-Carr, Steward, & Watson, 2018; Bozzini, 2020). These various kinds of risky behaviors are a kind of bad phenomenon unique to this age, which is extremely unfavorable to the healthy growth and development of minors. To address this problem, it is urgent to establish a suitable intervention education system, integrating the joint efforts of parents, society, schools and other parties, to provide comprehensive scientific education for minors, to establish the correct "three views" of minors, and to minimize the occurrence of these risky behaviors, which is also an objective requirement of the development of the times (Gillman et al., 2018; Zapolski et al., 2019; Jiang, Huang, & Tao, 2018; Skeen et al., 2019).

Literature (Ball et al., 2023) has found a significant decline in the proportion of youth engaging in risky behaviors in many countries, which may be caused by a combination of drivers, such as less structured face-to-face time between youth, stronger tobacco control policies, and stricter rules on youth drinking, which not only inhibit risky behaviors in a particular domain of youth, but also have a "ripple effect" of a single trend. Literature (James, Donnelly, Brooks-Gunn, & McLanahan, 2018) examined the impact of violent environments on different types of underage health risk behaviors and showed that community violence

environments were positively associated with underage high-risk behaviors, whereas domestic violence environments were positively associated with underage substance use behaviors, and violent environments were not associated with underage obesity risk behaviors. Literature (MacArthur et al., 2018) analyzed the role of school, family and individual level interventions and education in constraining a variety of risky behaviors among minors, and empirical studies found that general school interventions were effective in improving minors' poor physical activities such as smoking, drinking, substance use and antisocial behaviors, while family and individual level interventions did not have a significant impact. Literature (Tesler, Plaut, & Endvelt, 2018) proposed an urban forest health intervention program for at-risk adolescents and evaluated its impact on promoting physical activity and improving risky behaviors among at-risk adolescents, and experimentally validated the effectiveness of the proposed environmental intervention. Literature (Barbieri et al., 2017) suggests that mobile video gaming in unsafe areas poses significant safety risks for youth and requires comprehensive interventions to prevent this phenomenon, emphasizing the impact of public health accidents caused by video gaming, while playing mobile video games to improve physical activity practice in youth. Literature (Asbath et al., 2024) evaluated the effectiveness of anti-smoking campaigns in secondary schools in changing adolescents' smoking behaviors, and anti-smoking campaigns are an effective educational strategy by increasing adolescents' knowledge of the dangers of smoking and significantly reducing the number of smokers among students.

This paper explains the importance of sex education for minors from the perspectives of the family, school, society and the State (law). Taking into account the current reality of sex education, it proposes the use of social-emotional learning theory to raise students' awareness of gender equality and optimize minors' decision-making ability in sexual relations. A survey was conducted to determine the sexual knowledge, attitudes and behaviors of minors in different grades (first year of school to first year of college). Based on the questionnaire on health-related risky behaviors of minors, we obtained the incidence rate of risky sexual behaviors of minors, and then predicted the incidence rate of risky sexual behaviors of minors through one-way unconditional regression analysis. The intervention process of teaching sex education was designed, and the level of access to sex education was compared between the intervention group and the control group.

2 Development of and intervention in sex education for minors

2.1 The need for sex education for minors

Minors are the hope of the motherland and the future of the nation. Sex education for minors is in line with the new requirements for education in the context of the new era, and doing a good job in sex education for minors is an important part of promoting the comprehensive development of quality education.

Sex education helps minors to understand the relevant knowledge and helps mental health (Canan & Reich, 2024; Au Yeung, Hui, & Kung, 2024). As minors are in a special physiological and psychological period, they are undergoing quiet changes in both physiological development and psychological maturity. Therefore, timely and effective sex education should be carried out for minors at different stages in accordance with them, on the basis of letting minors know the relevant knowledge, understand the normal physiological phenomenon that occurs in their growth, so that they can eliminate the fear of physiological development. Once a minor is sexually abused, his psychological trauma is difficult to calm down, timely sex education can effectively alleviate the psychological trauma, help minors out of the psychological shadow, help mental health.

Sex education is conducive to resisting undesirable temptations, prompting minors to establish a sense of responsibility. Effective sex education can help minors understand a lot of knowledge about the physiology and psychology of both sexes, and dispel the strong curiosity about sex. At the same time, they also have correct views and concepts of the two sexes, effectively resisting pornographic content. Minors are ignorant and curious about gender relations, and in their psychological immaturity they are unable to deal with gender relations correctly. The implementation of appropriate sex education can help them understand, view and deal with gender relations correctly, and enhance their respective sense of responsibility.

Sex education can help minors to establish the awareness of protecting themselves and preventing problems before they occur.

Minors are vulnerable groups in society, sex education for minors can improve minors' awareness of self-protection, enhance minors' sense of crisis for others' behaviors, so that they can protect themselves and take precautions before it is too late.

2.2 Sex education for minors from a multidimensional perspective

The prevention, rescue and rehabilitation of minors' risky sexual behaviors require the concerted efforts of multiple parties, including families, schools, society, networks and the judiciary, and the coordination and cooperation of multiple measures. It is only by making each link practical, detailed, and to the point that

we can weave a dense safety net and promote the establishment of an ecosystem model for the protection of minors' rights and interests.

2.2.1 Families

Many parents are in a state of neglect or parental negligence towards their children's sex education. There is also a small number of parents who are worried that too early sex education is more likely to stimulate the child's sexuality and sexual awareness, prompting him to become curious about sex, which will have adverse effects. "Tell her when she grows up" has become one of the excuses for the lack of sex education in the family.

Family is the harbor where children grow up. Lack of sex education will have a negative impact on children's healthy growth, resulting in them not knowing how to protect themselves and not knowing how to respect life. Even in the face of sexual assault, it will be treated as a prank, thinking that it is a normal thing.

2.2.2 Schools

As sex education is receiving more and more attention from government departments, mainly because sexual transmission will become the most important way of spreading AIDS, the importance of sex education is becoming more and more prominent in the process of building a harmonious society in a comprehensive manner.

Sex education knowledge for high school students can penetrate into many aspects of the subject, mainly in the curriculum of biology. For the use of this permeable education, can make secondary school students learn sex knowledge by ear. Sex education for high school students is a long way to go and needs to start from many aspects. The State Education Commission carries out basic sex education work during the compulsory schooling stage of students, schools begin to implement mandatory sex education work, and the government classifies sex education as a mandatory course of study for students. The Government has also publicized sex education widely in society and strictly controlled the inflow of obscene and pornographic materials from outside the country, so as to ensure the purity of the sex education environment. Through the media, the government has also emphasized the importance of sex education in society, and has asked society to create a healthy and upwardly mobile sex education environment for minors.

Through the government's management and appeal, sex education work has made obvious achievements, the chance of sex crimes in the society has obviously decreased, and abortion surgery is also decreasing. At the same time, the Government is gradually learning from advanced foreign experience in sex education, and through moral and ethical norms it is restraining the sexual behavior of minors, helping minors to establish a correct concept of sexuality, and ensuring the healthy development of minors.

2.2.3 Society

For a long time, the topic of "sex" has been in the public perception of the community is a hidden and private topic, the public discussion is even more to talk about "sex" color change. People habitually think that it is influenced by traditional concepts, people uphold the traditional idea that "sex" is taboo. Scholars have often criticized this conservative concept, which has led to a general silence on the topic of sex in modern society, resulting in the absence of sex education. This paper argues that this is only one aspect of the problem.

Conservative ideas still express the private nature of "sex". This has led many people to believe that minimizing talk about sex is a form of protection for women. This seems to give a reasonable excuse for "not talking about sex", but if we look at the numerous incidents of sexual assault, we can see that the traditional sexual protection is overly colorful and overkill. The "protection" of silence does not bring much protection to the victimized girl, but rather puts more children at risk of being sexually abused. Social attitudes have gradually formed in the silence of the neglect and a certain degree of denial of sexuality, and the original intention of "protection" has evolved into a lack of care, concern and talk, with generation after generation gradually remaining silent. The "silent protection" of society as a whole has gradually evolved into a kind of over-protection of "sex", and people have become devoid of a general consensus on sex and a correct understanding of sexual assault.

2.2.4 State/law

Discussion on the age of sexual consent: Under the education system, most minors receive nine years of compulsory education starting from the age of six, and until the age of 16, they are in a stage of guardianship and education, focusing on their studies. They have less room for choice in their own development and are not yet physically or mentally mature. As a result, they are susceptible to coercion and control by others, and the age of sexual consent should match physiological development and cognitive level. In the absence of sex education, most minors' "sexual consent" during adolescence is hastily decided upon after being coaxed or coerced. Raising the age of sexual consent is therefore an effective deterrent to those who wish to do so. Based on the Civil Code, minors who have reached the age of 16 and are able to use their own labor as their main source of livelihood are recognized as persons with full capacity for civil behavior. As well as the Criminal Code's provisions on criminal responsibility, it is argued that 16 years of age is the effective age of sexual consent.

Deficiencies in the age of sexual consent: Compared with the relevant provisions of other countries, the relevant legislation has the problems of a lower age of sexual consent in specific relationships and an overly homogenous age of sexual consent.

Improvement of the Protection of Minors' Sexual Rights: Improvement of the age of sexual consent and refinement of the age of sexual consent. Raise the age of sexual consent in special relationships. Combined with the growth process of minors, minors at the age of 16 are still unable to realize independence in life, economy and other aspects, and are still subject to the restrictions and control of their guardians in many aspects. It is therefore possible to draw on the relevant provisions on civil capacity to presume that a person who has reached the age of 18, or who has reached the age of 16 and can rely on his or her own labor income as a major source of livelihood, is capable of independent consciousness and free choice. As far as the education of young people is concerned, most of those who have reached the age of 18 have already entered university to receive higher education. Therefore, the age of sexual consent for minors in special relationships should be extended to 18 years of age, and it is reasonable to set it at 16 years of age when they are able to have an independent source of livelihood.

Strengthening sex education: Protecting the sexual rights of minors is a complex social project, only resorting to the criminal law is to treat the symptoms but not the root cause, can only play the role of ex post facto regulation. From the root cause of minors' vulnerability to sexual abuse, the protection of minors from sexual abuse should be focused on the prevention of sexual abuse, strengthen the sex education of minors, guiding them to enhance the awareness of self-prevention is the fundamental solution to the problem.

First, schools should give full play to their function of supervising and protecting minors.

Secondly, at the family level, sex education for minors of different ages should be actively pursued. Strengthen the daily communication with the minor children, so that the minor children no longer "talk about sex color". Openly accept sex education, learning sex knowledge, can independently accept, carry out or refuse sexual behavior, bravely accusing sexual abusers, resorting to legal remedies. In this way, sexual abuse of minors will be effectively curbed, in order to solve the problem at its root.

2.3 Optimization of interventions in comprehensive sex education for minors

With the development and progress of the times, sex education has continued to rise in the public mind, and has been recognized as an important educational programme that effectively protects the rights and interests of students, enhances gender equality, promotes healthy development and reduces sexual violence. However, due to the contradictions and conflicts between the complex concepts of sex education, the implementation of sex education is still subject to more obstacles. In the current situation where it is difficult to implement a complete sex education teaching, the use of social-emotional learning theory to train students to

enhance their awareness of gender equality, improve gender relations, and promote decision-making ability in sexual relations may become an alternative program that can be accepted by the public.

Social-emotional learning is defined as the process by which individuals acquire and apply knowledge, emotions, and abilities to help them recognize and manage emotions, enhance empathy, form a healthy self, establish and maintain good relationships, and make responsible decisions. And based on this, social-emotional competence, which is the competence developed through social-emotional learning, was proposed. The competency is categorized into five dimensions, namely, self-awareness, self-management, social awareness, interpersonal skills, and responsible decision-making.

Social-emotional learning is a refined and operational educational program that has been developed in line with the requirements of emotional education, and has received attention and entered into school classroom practice. As of 2018, more than 500 pilot schools have introduced school-based programs for social-emotional learning.

2.3.1 Need for optimization

Sex education serves the purpose of fostering modern citizens with all-round comprehensive development, helping students to establish and maintain respectful social and sexual relations, helping them to better integrate and adapt to society, and contributing to their healthy and happy growth.

In recent years, the rapid progress of science and technology and the fusion of multiple cultures have brought new challenges to the development and growth of students, and also put forward new requirements for sex education.

However, the current sex education still exists in a simple mode and single content, and is even in a state of absence in most schools. The absence and imperfection of sex education creates a conflict between students' needs and the current situation, and this conflict is the very voice that calls for comprehensive and integrated sex education, and also becomes a necessity for the integration of social-emotional learning and sex education programs.

2.3.2 Optimization strategies and practices

Optimization of educational content

- 1.Focus on students' needs
- 2.Theory linked to practice
- 3.Content structure into a system

The biggest problem with the content of current secondary school textbooks on sex education is that it is complex, diversified and unsystematic, because sex education covers a wide range of human-related content and involves knowledge from different disciplines. Sex-related contents in textbooks are scattered in different grades and subjects, and are often repeated in different textbooks. Comprehensive and systematic learning is conducive to the construction of a complete knowledge system, so the improvement of the content of education requires the construction of a scientific and perfect structural system.

Optimization of educational methods

The social-emotional learning courses conducted were analyzed and summarized, in addition to ten teaching strategies to promote the development of social-emotional competence:

Adhering to a student-centered approach, streamlining teachers' teaching language, supporting students in making responsible decisions, creating a warm teaching environment, conducting cooperative learning, organizing classroom discussions, organizing students' self-reflection and self-evaluation, adopting a multi-method teaching activity design, providing students with appropriate learning challenges, and fostering the development of students' socio-emotional competence through demonstration, practice, feedback, and guidance.

Social-emotional learning theory suggests that the social-emotional learning process should be student-centered and that the instructional methods used should be designed to facilitate students' experiences, feelings, and reflections. Therefore, it is taught primarily through activities in which students develop different emotions. Applying these teaching activities to sex education not only promotes the cultivation of students' social-emotional ability, but also effectively guarantees the mastery and consolidation of knowledge, attitude and skills in sex education.

Optimization of educational environment

The educational environment emphasized by social-emotional learning is a positive one, hoping that through the construction of the physical environment and the organization and management of school personnel, a psychological atmosphere of mutual respect, support, tolerance and encouragement will be formed, which makes it possible for teachers and students to obtain supportive expressions of emotion, and helps to promote a good connection between classmates, teachers and students.

This paper summarizes them as building a safe physical environment with a sense of belonging and a physical environment that promotes student participation. An interpersonal environment of respect and mutual assistance and an emotional environment of warmth and support.

3 Survey on risky sexual behavior of minors

3.1 Current situation of sexual cognition, sexual attitude and sexual behavior

3.1.1 Research methodology

Basic Information

Student subjects from six schools (including one college, three junior high schools and two high schools) in a city were randomly selected for this study to ensure that the respondents were all minors. 650 questionnaires were randomly distributed and 623 valid questionnaires were returned, with a validity rate of 95.8%.

Of the sample surveyed, 304 (48.8%) were male students. There were 319 female students, accounting for 51.2%, with a higher proportion of female students. From the point of view of current residence, some students' current residence is dormitory, there are 275 students, accounting for 44.1%. In terms of place of origin, the proportion of students from urban and rural areas was distributed in a more balanced way, with 300 students from urban areas, accounting for 48.2%, and 323 students from rural areas, accounting for 51.8%. In terms of parental education, there were more students whose parents' education was from junior high school to senior high school, with 262 students, accounting for 42.1%. From the point of view of whether they are only child, 346 students are not only child, accounting for 55.54%.

Data processing

The data were imported into SPSS20.0 statistical software, and descriptive statistics, independent samples T-test, one-way ANOVA and chi-square test were performed on the valid data.

3.1.2 Findings

Sexual cognition

The overall descriptive statistics of the sexual cognition section of the questionnaire were analyzed, and the mean and standard deviation of the dimensions of sexual cognition showed that the mean score of students' sexual cognition was 3.002, which was lower than that of the norm (3.47), indicating that the sexual cognition of the underage students in the city was low in general.

An independent samples t-test was done on the sexual perception scores of students of different genders (male/female) and the gender differences in sexual perception are shown in Table 1. There were significant gender differences in

students' sexual cognition and its sub-dimensions physiological knowledge and sexual knowledge scores. Male students' sexuality perception score (3.68) was significantly higher than that of female students (2.93).

Table 1: Gender differences in sexual cognition

	Gender		t	p
	Man (n=304)	Woman (n=319)		
Physiological knowledge	4.32 \pm 0.96	3.14 \pm 1.21	16.5267	0.000**
Sexual knowledge	2.98 \pm 0.57	2.47 \pm 1.36	5.2031	0.000**
Sexual cognition	3.68 \pm 0.24	2.93 \pm 0.89	9.4055	0.000**

A one-way ANOVA was conducted to analyze the sexual perceptions of students in different grades, and the grade-level differences in sexual perceptions are shown in Table 2. Freshmen students had higher sexual perceptions on all dimensions than other grades.

Table 2: Grade differences in sexual cognition

Grade	Dimension of sexual cognition			F
	Physiological knowledge	Sexual knowledge	Sexual cognition	
Freshman year	3.94 \pm 0.76	2.93 \pm 0.67	3.21 \pm 0.79	16.856**
Senior 3	3.36 \pm 1.14	2.97 \pm 0.86	2.99 \pm 1.03	5.6231*
Senior 2	3.35 \pm 1.23	2.75 \pm 0.98	3.01 \pm 1.04	5.7004*
Senior 1	3.24 \pm 1.54	2.63 \pm 1.01	2.75 \pm 1.21	5.6937*
Junior 3	3.14 \pm 0.89	2.35 \pm 1.25	2.53 \pm 1.33	4.1351**
Junior 2	2.86 \pm 0.65	2.21 \pm 1.34	2.41 \pm 0.96	4.2374**
Junior 1	2.65 \pm 1.42	2.23 \pm 1.25	2.35 \pm 1.36	3.2214**

Sexual attitudes

Overall descriptive statistics were analyzed for sexual attitudes in five sub-dimensions, and the mean and standard deviation of the dimensions of sexual attitudes are shown in Table 3.

In the students' sexual attitude scale, the mean score of responsibility was 3.15, indicating that students do not have sex easily and are willing to be responsible after having sex. Mean score of communicative 3.09 indicates that students like to communicate and experiment sexually with the opposite sex.

Table 3: The average and standard deviation of each dimension of sexual attitude

Dimension	Average	Standard deviation
Sense of responsibility	3.15	1.235
Compatibility	2.66	1.067
Instrumental	2.41	0.914

Pleasure	2.82	1.235
Communication	3.09	0.918
Sexual attitude	2.826	0.825

Differences in students' sexual attitudes across the land of origin are shown in Table 4. The overall score of sexual attitudes of students from urban areas was significantly higher than that of students from rural origins, indicating that urban students were more open to sexual attitudes. Except for communicativeness, which had no significant place-of-origin difference, students from urban origin had significantly higher scores than students from rural origin on sexual attitudes and its four sub-dimensions, i.e., responsibility, tolerance, instrumentality, and pleasure.

Table 4: The difference between the student attitude and the source ground

Dimension of sexual attitude	Biotically		t	p
	City (n=300)	Countryside (n=323)		
Sense of responsibility	3.45 ± 0.99	3.71 ± 0.95	1.362	0.236
Compatibility	2.36 ± 1.13	1.96 ± 1.21	5.804	0.000**
Instrumental	2.79 ± 1.03	2.53 ± 0.88	6.135	0.000**
Pleasure	3.36 ± 1.01	2.89 ± 0.79	4.112	0.000**
Communication	3.21 ± 0.86	2.75 ± 1.32	2.396	0.039*
Sexual attitude	3.03 ± 1.27	2.77 ± 0.97	5.174	0.000**

Sexual behavior

Overall descriptive statistics were analyzed for the sexual behavior section of the questionnaire and the mean and standard deviation of sexual behavior are shown in Table 5. In terms of broad sexual behavior, 72.55% of the students were exposed to sexual media. 44.14% of the minors among the respondents had romantic behavior.

Table 5: The sex line is the average and the standard deviation

Dimension	Average	Standard deviation	Frequency	Percentage/%
Access to media	1.75	0.562	452	72.55
Sexual impulse	1.45	0.415	306	49.12
Love behavior	1.86	0.726	275	44.14
Masturbation	1.23	0.773	153	24.56
Heterosexual behavior	1.34	0.639	194	31.14
Total	7.63	1.235	/	/

3.2 Prediction of the occurrence of risky sexual behavior

3.2.1 Incidence of risky sexual behavior

Individuals who scored 1 and above on any of the entries in the Unprotected Sexual Behavior subscale of the Health-Related Risk Behavior Questionnaire for Minors were identified as having engaged in risky sexual behavior based on their scores on the Unprotected Sexual Behavior subscale of the questionnaire. Individuals who scored 0 for each entry were designated as individuals who had not engaged in risky sexual behavior.

The prevalence of risky sexual behavior among minors is shown in Table 6. 102 out of 623 or 16.37% of all students had ever engaged in unsafe sex. Male students 75 or 24.67%. Female students were 27 or 8.46%. The combined results of the incidence of risky sexual behavior among minors show that the number of males is higher than that of females for all types of risky sexual behavior among minors.

Table 6: The incidence of risk behavior of minors

	Total sample/%	Man (n=304)	Woman (n=319)
Have had unsafe sex	16.37(102)	24.67(75)	8.46(27)
Have had sex with two or more people	8.35(52)	13.49(41)	3.45(11)
Having sex with others after drinking or taking drugs	7.38(46)	13.16(40)	1.88(6)
Once pregnant or a sexual partner is pregnant	6.74(42)	12.5(38)	1.25(4)
Had sex with strangers	4.98(31)	7.24(22)	2.82(9)

3.2.2 Unconditional logistic regression

A large number of studies have found that factors such as gender, age, subjective socioeconomic status, sexual knowledge, sexual attitudes, drinking behavior, and impulsive personality collectively influence the prevalence of risky sexual behavior among minors.

In order to accurately explore the effects of sexual attitudes of minors on risky sexual behavior of minors, it is necessary to control for other factors influencing risky sexual behavior of minors. For this reason, this study first did a one-way unconditional regression analysis to screen the influencing factors of minor risky sexual behaviors other than minor sexual attitudes in this study. One-way unconditional regression analyses were conducted with gender, age, family structure, subjective socioeconomic status, drinking behavior, and impulsivity as independent variables and underage risky sexual behavior as the dependent variable.

Univariate regression analysis of predictors of risky sexual behavior among minors is shown in Table 7. The results showed that age, gender, sexual knowledge, drinking behavior, and impulsivity were significant predictors of risky sexual behavior among minors (β =0.032-0.635, $p < 0.05$). Subjective

socioeconomic status and family structure were not significant predictors of risky sexual behavior in minors.

Table 7: The prediction factor of the risk behavior of minors is analyzed

	β	SE	p	$OR(95\%CI)$
Age	0.362	0.197	0.024	1.336(1.025~1.866)
Gender	-1.733	0.215	0.003	0.189(0.112~0.354)
Subjective socioeconomic status	0.057	0.043	0.179	0.911(0.835~1.037)
Sexual knowledge	0.032	0.019	0.012	1.063(1.205~1.0213)
Family structure	0.224	0.436	0.414	1.758(1.504~2.365)
Drink	0.635	0.054	0.003	1.869(1.695~2.013)
Impulse	0.071	0.022	0.007	1.074(1.036~1.088)

3.3 Multifactorial analysis of risky sexual behavior of minors

The variables with statistically significant differences in the single factors were included in the binary logistic regression analysis using whether or not sexual intercourse had occurred as the dependent variable (1 = yes, 2 = no).

The logistic regression analysis of sexual intercourse occurrence among minors is shown in Table 8. The results showed that being male, age >16 years, having migrated, having a relationship, agreeing to have sex outside of marriage, agreeing to have a one-night stand, and agreeing to have a one-time sex session without using a condom were the risk factors for having sex. Agreeing that finding a casual sex partner is a fashionable thing is a protective factor for having sex ($p<0.05$).

Table 8: Logistic regression analysis of juvenile behavior

Variable		β value	S_x^- value	$Wald \chi^2$ value	P value	OR value	95%CI
Gender	Man	1.635	0.321	22.364	<0.005	3.456	1.830~5.624
	Woman (control)						
Age	>16	0.828	0.426	5.233	0.047	3.124	1.024~4.207
	≤ 16 (c ontrol)						
Migration experience	Have	0.529	0.234	5.755	0.011	1.869	1.247~3.625
	No (control)						
Is there a love experience	Have	1.981	0.342	43.625	<0.003	3.064	1.305~5.798
	No (control)						
I think it's acceptable to	Consent	0.869	0.344	6.739	0.025	3.273	1.297~5.632
	Different						

Variable		β value	S_x^- value	Wald χ^2 value	P value	OR value	95%CI
be engaged	meaning						
I think it is acceptable to find a partner.	Agree /unclear	1.286	0.623	5.695	0.063	3.465	1.521~8.917
	Disagree /(control)						
I think it is acceptable to be with a casual partner and occasionally not use a condom.	Agree /unclear	1.771	0.563	21.504	<0.003	7.914	3.896~21.541
	Disagree /(control)						
I think it's fashionable and exciting to find a partner.	Agree /unclear	1.496	0.728	4.361	0.029	0.218	0.086~0.997
	Disagree /(control)						

4 Comprehensive sexual health education interventions

4.1 Intervention design

The study population for the sex education intervention for minors based on the social-emotional learning theory implemented in this paper was first-year students (in the colleges and universities of the six schools in the previous section). The number of men and women in the intervention group was 169 and 176 respectively, and the number of men and women in the control group was 135 and 143 respectively.

As the content of this survey involves privacy, it is a relatively sensitive survey. In order to obtain more realistic results, this survey used anonymous survey methods, in order to eliminate the concerns of the survey respondents, to ensure the authenticity of the data. Before distributing the questionnaire to the survey respondents to explain the purpose of this study is aimed at scientific research, not for profit and will not disclose the privacy of the investigator and other related information, to minimize the investigator's ideological concerns.

The specific steps of the control group and the intervention group are as follows:

1. In the control group, the questionnaire will be distributed to the head of each student's class through the counselor teacher, and the head of each student's class in different grades will be responsible for the specific organization of the survey. Class leaders were introduced and trained on the purpose of the study, explaining that the purpose of the study was to understand the situation of sexual knowledge,

attitude and behavior of minors, as well as instructing them on how to fill out the questionnaires.

The class leaders organized the distribution, filling out and recovery of the questionnaires before and after the study, and the distribution, filling out and recovery of the questionnaires before and after the study coincided with the time of the intervention group.

2.The teachers of the public elective courses in the intervention group were responsible for the specific organization of the survey. Teachers will distribute, fill out and collect questionnaires for all students who have successfully taken the course before the course starts and after the course ends.

The survey includes:

- 1.General demographic characteristics.
- 2.Sexual and Reproductive Health Knowledge (Reproductive Knowledge, Contraceptive Knowledge, STD/AIDS Knowledge).
- 3.Sexual attitudes: attitudes towards underage love and different, same-sex intimacy, virginity/male, sexual masturbation, awareness of sexual safety, and knowledge of sexual diseases.
- 4.Acquisition of sexual knowledge and health education acquisition/demand situation.
- 5.Sexual behavior related situation.

In addition, during the intervention process, interviews were conducted with teachers of the intervention group on specific situations that arose during the development of the health education program. Observation of the performance of the intervention group in the learning process of the health education course. Conducting interviews with some of the intervention group students regarding their satisfaction with the teaching of the course.

4.2 Comparison of sexual knowledge rates

A comparison of the effectiveness of health education interventions is shown in Table 9. The results of the survey showed that in terms of sexual knowledge, the intervention group had higher knowledge rates than the control group in the areas of "whether masturbation can cause serious bodily harm", "the ways of transmission of AIDS", and "the duration of the female safe period", "whether sexual behavior can lead to pregnancy" is higher than that of the control group, and the difference is statistically significant.

Table 9: Comparison of health education intervention

Question	Awareness/%		χ^2	P
	Intervention group(n=345)	Control group (n=278)		
Does masturbation cause serious physical damage?	39.45	27.11	10.235	0.006
Does sex lead to pregnancy?	62.38	10.24	235.601	0.001
The transmission of AIDS	89.67	70.34	40.134	0.003
Women's safety time	65.31	49.007	20.715	0.000

A comparison of knowledge of safe contraceptive measures is shown in Table 10. In terms of knowledge of the safety of contraceptive measures, the intervention group's knowledge of the safety of contraception in terms of "condom" and "pill" was significantly higher than that of the control group, and the difference was statistically significant. The difference was statistically significant. The intervention group's knowledge of safe contraceptive measures increased, indicating that the health education program had a positive effect on students' sexuality knowledge in general.

Table 10: Cognitive comparison of safety contraceptive measures

Question	Categories	Intervention group (n=345)	Control group (n=278)	χ^2	P
Safe and effective contraception	Extracorporal ejaculation	253/0.4061	213/0.3419	201.468	0.000
	Condoms	267/0.4286	245/0.3933		
	Safe sex	302/0.4848	63/0.1011		
	Contraceptive pill	104/0.1669	177/0.2841		

4.3 Comparison of sexual attitude interventions

A comparison of sexual attitudes between the intervention group and the control group of minors of different genders is shown in Table 11. The results of the survey show that in the comparison between the student intervention group and the control group, there is no statistically significant difference in the attitudes towards "the adverse effects of abortion on women's physical and mental health" and "homosexuality", while the differences between the intervention group and the control group on the rest of the issues are all statistically significant.

The proportion of minors in relationships was higher in both groups, and relatively higher in the control group. Men in the control group had more open attitudes towards "premarital sex" than the intervention group, while women in the

intervention group had more conservative attitudes towards "premarital sex" than the control group.

Table 11: The intervention group was compared with the control group

Topic		Intervention group (n=345)		Control group (n=278)		χ^2	P
		Agree	Disagree	Agree	Disagree		
Adolescent love	Man	134	35	101	34	81.205	0.003
	Woman	102	74	107	36		
Premarital sex	Man	105	64	118	17	35.771	0.000
	Woman	124	52	124	19		
Homosexuality	Man	89	80	115	20	19.604	0.004
	Woman	162	14	118	25		
A woman should keep a virgin before marriage.	Man	92	77	102	33	2.634	0.721
	Woman	133	43	77	66		
A man should keep a virgin before marriage.	Man	75	94	126	9	89.714	0.000
	Woman	92	84	124	19		
Sex skills need to be learned by learning	Man	142	27	85	50	103.627	0.000
	Woman	114	62	65	78		
Condoms are used for sex.	Man	115	54	132	3	40.509	0.007
	Woman	85	91	72	71		
The adverse effects of artificial abortion on women's physical and mental health.	Man	134	35	121	14	6.517	0.143
	Woman	157	19	121	22		

5 Conclusion

This paper is aware of the necessity of sex education for minors, and assesses the current development of sex education for minors from different perspectives respectively, thus proposing the use of social-emotional learning theory to optimize the intervention of sex education for minors. The three dimensions of sexual cognition, sexual attitude and sexual behavior are used to understand the level of minors' sexual education acquisition. Combining multiple factors to predict the incidence of risky sexual behaviors among minors, of which age,

gender, sexual knowledge, drinking behavior, and impulsivity have a significant predictive effect on risky sexual behaviors among minors. Subjective socioeconomic status and family structure were not significant predictors of risky sexual behavior among minors. Based on the social-emotional learning theory to optimize the sexual education of minors, the minors in the intervention group were significantly different from the minors in the control group in terms of sexual knowledge and sexual attitude.

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