



The Dynamics of Adolescent Sexuality: A Comprehensive Study

Raudhatul Jannah^{1*}, Pribakti Budinurdjaja², Silvia Kristanti Tri Febriana³, Syamsul Arifin¹ and Roselina Panghiyangani¹

¹Master of Public Health Magister Program, Faculty of Medicine and Health Science, Lambung Mangkurat University, 70714, Indonesia; ²Obstetrics and Gynecology, Ulin Regional Hospital, 70122, Indonesia; ³Psychology Study Program, Faculty of Medicine and Health Science, Lambung Mangkurat University, 70714, Indonesia

* Correspondence: raudhatuljannahkimrara@gmail.com

Article History

Received
12 February 2024

Accepted
12 April 2024

Available Online
21 April 2024

Keywords

Knowledge
Attitude
Parenting pattern
Spiritual belief
Banjarbaru

Abstract

Adolescent sexual behavior is all adolescent behavior that is driven by sexual desire. One of the impacts of risky sexual behavior is STIs in the form of AIDS. Banjarbaru City is one of the cities with the highest prevalence rate of AIDS sufferers aged 15-19 years, namely 28.57%. The aim of this research is to analyze the influence of knowledge, attitudes, parenting patterns and spiritual beliefs on adolescent sexual behavior through intention in Banjarbaru City. This research uses cross sectional. There are 200 samples using the Cluster Proportional Random Sampling technique. The instrument uses a questionnaire. Dependent variable: adolescent sexual behavior. Independent variables: knowledge, attitudes, parenting patterns and spiritual beliefs. Intermediary variable: intention. Analysis uses path analysis. The research results show the p-value of the direct effect on sexual behavior, knowledge variables ($p=0.016$), parenting patterns ($p=0.004$) and spiritual beliefs ($p=0.005$), attitudes ($p=0.305$). Simultaneously the p-value of all independent variables on sexual behavior ($p=0.014$). Taken together in the indirect effect, intention was not a significant mediating variable ($p=0.159>0.05$). The conclusion of this research is that there is a direct effect between knowledge, parenting patterns and spiritual beliefs and there is no direct effect between attitudes towards sexual behavior. Simultaneously, all independent variables have a direct effect on sexual behavior. The indirect effect of intention was not a significant mediation in this study.

Introduction

Adolescence is a period of transition from childhood to adulthood marked by complex and dramatic physical and emotional changes and social adjustments that are important for adulthood. Such conditions make adolescents not have mental maturity yet because they are still looking for their own identity, so they are very vulnerable to various influences in the social environment, including in their sexual behavior [1]. Sexual behavior is behavior that arises because of sexual urges or activities to get pleasure from the sexual organs through various behaviors such as fantasizing, holding hands, kissing, hugging, and having sexual intercourse. Previous studies state that the majority of adolescents have sexual intercourse for the first time when they are in high school and at the age of around 15-18 years old [2,3].

In the social life of adolescents, they begin to be attracted to the opposite sex, begin to have correlations or dates, and begin to get encouragement to have sex that comes from social pressures, especially from the interest and curiosity of adolescents about sex [4,5]. However, to escape from existing sexual impulses, adolescents try to express their sexual urges in various forms of sexual behavior, starting from dating activities, doing real dating, etc. Even though sexuality is a normal part of their development, sexual behavior is accompanied by risks that are borne not only by adolescents but also by their parents [6].

According to the World Health Organization (WHO), about one-fifth of the world's population are adolescents aged 10-19 years, and around 900 million are in developing countries. In addition, demographic data in the United States shows that the number of teenagers aged 10-19 years is around 15% of the population. In Asia Pacific, the population is 60% of the world's population, and one-fifth is teenagers aged 10-19 years old [7].

Based on WHO data, which conducted research in several developing countries, it is shown that 40% of male youth aged 18 years old and 40% of female youth aged 18 had had sex even though they were not married yet [8]. Basic health research in Indonesia (Riskesmas) in 2018 concerning reproductive health and risky behavior in adolescents found that 0.7% of female adolescents and 4.5% of male adolescents had had premarital sexual intercourse [9]. From the results of the research above, there are still many teenagers who engage in risky sexual behavior. This affects adolescents because this risky sexual behavior has an impact on adolescent growth and development. The World Health Organization (WHO) estimates that every year there are 350 million new STI sufferers in developing countries [10].

Factors that affect sex in adolescents include: first, developmental factors that come from families where children begin to grow and develop. Second, external factors include schools that play a role in achieving maturity. Third, communities include customs and social development (peer influence). Other factors include sexual drive, state of health, psychology, sexual experience, and exposure to sexual information and knowledge [11]. According to Notoatmodjo [12], there are several factors that influence a person's behavior, which are internal and external factors. Internal factors consist of the characteristics of the person concerned, level of intelligence, confidence, emotional level, and gender. External factors consist of the environment, including physical, social, cultural, economic, and political factors.

Research on adolescent sexual behavior conducted by Sari in Lebong Regency, Bengkulu [13] and from Nurdianti et al. in the City of Tasikmalaya [14], states that there is a correlation between knowledge and premarital sexual behavior in adolescents. In addition, according to research by Tungka et al. [15], there is a significant correlation between attitudes towards various sexual behaviors and adolescent sexual behavior. Then research from Sari [13] and Putri [16] which states that there is a correlation between parenting parents to sexual behavior in adolescents. Then there is research by Setyowati and Hakim [17] and Pulungan et al. [18] which states that there is a correlation and influence among spirituality and religiosity to adolescent sexual behavior. Then research from Fitriani et al. [19] and Hadi and Winarti [20] states that there is a correlation between intention to sexual behavior in adolescents.

This is in contrast to research conducted by Lestari [21], which stated that there is no correlation between knowledge, attitudes, and the role of parents in premarital sexual behavior. Research from Masni [22] also said that there is no influence between religious/spiritual understanding and the sexual behavior of at-risk adolescents. Based on this, it can be seen that there are differences in the results between one study and another where there is research that finds that there is no correlation between knowledge, attitudes, parenting patterns, and spiritual beliefs with adolescent sexual behavior. However, in general, more research has found that there is a correlation between these variables.

Risky sexual behavior in adolescents, if not handled properly, can lead to Unwanted Pregnancy Cases (KTD), which in turn lead to unsafe abortions, infanticide, Sexually Transmitted Infections (STIs), and even death [23,24]. The results of the Adolescent Demographic and Reproductive Health of Indonesia Survey regarding abortion reported that 52% of adolescents had had an abortion [25]. Sexually Transmitted Infections (STIs) rank in the top 10 reasons for seeking treatment in many developing countries. One of the existing STIs is AIDS due to risky sexual behavior; where according to the results of the 2018 Riskesmas, there are 3.3% of adolescents aged 15-19 years suffer from AIDS. Based on data from the South Kalimantan Provincial Health

Office, Banjarbaru City is one of the cities that has the highest prevalence rate of people with AIDS aged 15-19 years, which is 28.57% [26].

Observed from survey data from the Indonesian Child Protection Commission (KPAI), 32% of adolescents in Indonesia, especially those who live in big cities, admit to having had premarital sex [27]. Banjarbaru City, as one of the big cities as well as the capital city of South Kalimantan Province, is certainly not free from problems of sexual behavior. Where with a prevalence of 51.67%, risky sexual behavior is carried out, which causes HIV/AIDS in Banjarbaru City [26].

The city of Banjarbaru as an urban area is synonymous with the correlation of teenagers who tend to be free, which can trigger sexual behavior, resulting in the granting of child marriage dispensation reaching a prevalence of 86.96% [28]. In addition, no research has been conducted regarding the influence of knowledge, attitudes, parenting patterns, and spiritual beliefs with intention as intermediaries on adolescent sexual behavior in Banjarbaru City. Therefore, this research needs to be conducted, which aims to determine the factors that influence adolescent sexual behavior in Banjarbaru City.

Materials and Methods

Research Design

This study adopts an observational and analytical approach, focusing on understanding the relationships between various factors and adolescent sexual behavior. The research design employed is a cross-sectional survey design, which enables the collection of data at a single point in time, allowing for the examination of the prevalence and correlates of adolescent sexual behavior within a specific timeframe [29].

Sampling Technique

A cross-sectional survey method was utilized to gather data from a diverse sample of adolescents. The sample size of 200 respondents was determined using the Lemeshow formula, ensuring adequate statistical power to detect meaningful relationships. Sampling was conducted using a cluster proportional random sampling technique, which involved selecting a representative sample of State High Schools from each of the 5 sub-districts of Banjarbaru City. This approach ensured that the sample encompassed a variety of socio-demographic backgrounds and geographic locations, enhancing the generalizability of the findings.

Study Area and Participants

The research was conducted across 5 sub-districts of Banjarbaru City, providing a comprehensive understanding of adolescent sexual behavior within this urban context. State High Schools from each sub-district participated in the study, including SMAN 1 Banjarbaru in South Banjarbaru District, SMAN 2 Banjarbaru in North Banjarbaru District, SMAN 3 Banjarbaru in Cempaka District, SMAN 4 Banjarbaru in Liang Anggang District, and SMAN 5 Banjarbaru in Landasan Ulin District. By including schools from diverse areas, the study captured a wide range of experiences and perspectives. Data collection took place over a period of five months, from March 2022 to July 2023, allowing for a comprehensive examination of seasonal variations and long-term trends in adolescent sexual behavior.

Instrumentation

Data were collected using a structured questionnaire designed to assess various factors associated with adolescent sexual behavior. The questionnaire included items measuring knowledge (X1), attitude (X2), parenting pattern (X3), and spiritual beliefs (X4) related to sexual behavior, all of which underwent rigorous testing for validity and reliability. Additionally, the questionnaire included demographic questions to characterize the sample and assess potential confounding variables. By employing a well-validated instrument, the study ensured the accuracy and consistency of the data collected.

Data Analysis

Descriptive analysis and path analysis were conducted using the Statistical Package for the Social Sciences (SPSS) application [30]. Descriptive analysis involved summarizing the characteristics of the sample and key variables, providing insights into the distribution and prevalence of adolescent sexual behavior and its correlates. Path analysis, a sophisticated statistical technique, was used to examine the direct and indirect relationships between variables, allowing for the identification of underlying mechanisms and pathways influencing adolescent sexual behavior. By employing both descriptive and inferential statistical analyses, the study aimed to provide a comprehensive understanding of the factors contributing to adolescent sexual behavior in Banjarbaru City.

Results and Discussion

Referring to the data presented in Table 1, it's evident that the characteristics of respondents based on gender are mostly male, with 104 (52%) respondents, while respondents of female gender are 96 (48%). Characteristics based on age are found: the majority is 16 years old, with 64 (32%) respondents, while the least aged 19 years are 15 (7.55%). Characteristics based on religion are that most respondents are Muslim, with 179 (89.5%) respondents.

According to Table 2, the majority of respondents have moderate sexual behavior, which are 157 (78.5%) respondents. Respondents with moderate sexual behavior mostly have moderate knowledge that is 134 (67%) respondents; a high attitude 87 (43.5%) respondents; have moderate parenting patterns which are 132 (66%) respondents; have spiritual beliefs with 73 (36.5%) respondents are moderate and there are 88 (44%) respondents had high intentions.

Table 1. Characteristics of respondents.

Characteristics of Respondents	Frequency	%
Gender		
Man	104	52.0
Woman	96	48.0
Age		
16 years old	64	32.0
17 years old	62	31.0
18 years old	59	29.5
19 years old	15	7.5
Religion		
Islam	179	89.5
Catholic	10	5.0
Protestant	5	2.5
Buddha	3	1.5
Hindu	3	1.5
Total	200	100

Source: Primary Data, 2023

The Influence of Adolescent Knowledge on Adolescent Sexual Behavior

Table 3 shows that the direct effect is 0.016 ($p < 0.05$), which means that knowledge influences adolescent sexual behavior. The results of the statistical analysis also show that the R^2 value is 0.055, which means that 5.5% of the knowledge variable influences adolescent sexual behavior, while the remaining 94.5% is influenced by other variables. This is in line with research from Fathona et al. [31], where adolescents who have good knowledge about reproductive health tend not to engage in risky sexual behavior because they are aware of their own health through the information they have received about risky sexual behavior. This is because the more teenagers understand and know about reproductive health, the more they understand the impact of risky sexual behavior, so they will think about doing this behavior. In contrast to

adolescents who have less knowledge, they tend to engage in risky sexual behavior because a lack of knowledge makes adolescents not understand the impact of this behavior on their health.

Table 2. Descriptive description of respondents.

Adolescent Sexual Behavior								Total
Variable		Low		Moderate		High		
		n	%	n	%	n	%	
Knowledge	Low	0	0	7	3,5	5	2,5	12 (6%)
	Moderate	1	0.5	134	67	36	18	171 (85.5%)
	High	0	0	16	8	1	0.5	17 (8.5%)
Attitude	Low	0	0	12	6	4	2	16 (8%)
	Moderate	0	0	58	29	17	8,5	75 (37.5%)
	High	1	0.5	87	43.5	21	10.5	109 (54.4%)
Parenting pattern	Low	0	0	3	1.5	1	0.5	4 (2%)
	Moderate	1	0.5	132	66	34	17	167 (83.5)
	High	0	0	34	17	7	3,5	29 (14.5%)
Spiritual Beliefs	Low	0	0	31	15.5	15	7,5	46 (23%)
	Moderate	1	0.5	73	36.5	22	11	96 (48%)
	High	0	0	53	26.5	5	2,5	58 (29%)
Intention	Low	0	0	4	2	4	2	8 (4%)
	Moderate	1	0.5	65	32.5	23	11.5	89 (44.5%)
	High	0	0	88	55	15	7,5	103 (51.5%)
Total		1(0.5%)		157 (78.5%)		42 (21%)		200 (100%)

Table 3. Path analysis results.

Variable	Indirect Effects (X Against Y Through Z)		R ²
	Z Against Y	Direct Effect (X Against Y)	
Knowledge (X1)	0.016	0.195	0.055
Attitude (X2)	0.305	0.261	
Parenting pattern (X3)	0.004	0.209	0.067
Spiritual Belief (X4)	0.005	0.435	0.065
Intentions (Z)	0.111		
Knowledge, Attitudes, Parenting Patterns, Spiritual Beliefs	0.014	0.288	0.122

In this study, it was found that there were respondents who had moderate knowledge but still engaged in risky sexual behavior. The results showed that respondents who answered correctly about statements regarding the definition of sexual behavior are 55.8%, statements regarding risk factors for sexual behavior are 51%, statements regarding activities correlated to sexual behavior are 56%, statements regarding what are the impacts of risky sexual behavior are 56.8% and statements about how to prevent risky sexual behavior are 60%. In this study there are also respondents with moderate knowledge who had moderate parenting patterns of 84.2% of respondents. According to Satria [32], revealed that generally adolescents have a strong sexual drive due to hormonal changes that exist in adolescents. The role of parents is very necessary in providing good direction and information about sexuality, setting signs in dating is very necessary so that teenagers do things that are still within the corridors that are appropriate and safe to do, in dating they should not mishandle their behavior just for the purpose of sheer pleasure.

The knowledge obtained is sometimes not what it should be; a lot more negative knowledge correlated to sex is obtained than positive knowledge, which can harm teenagers if parents can

give positive knowledge as the closest person. Adolescents who see sex as a taboo subject when discussed with their parents make them uncomfortable expressing what they want to know. It is hoped that sex education is given to adolescents from an early age and is no longer considered taboo for discussion because this is a human life cycle [33].

In this study, respondents with moderate knowledge are 32.7% of 16 years old, 31% of 17 years old, 28.1% of 18 years old, and 8.2% of 19 years old. Respondents who are still in their teenage years are still in a period of finding their identities. When identity has been found, the development task is directed at individual efforts to improve the ability to establish close relationships with the opposite sex. So, even though teenagers understand things correlated to risky sexual behavior, they tend to ignore it [34].

The Influence of Adolescent Attitudes to Adolescent Sexual Behavior

Based on research results show that the direct effect, which is the influence of attitudes to adolescent sexual behavior, is 0.305 ($p > 0.05$), which means that there is no influence of attitudes to adolescent sexual behavior.

These results are not in line with research conducted by Theresia et al. [35] which states that adolescents with positive sexual attitudes are adolescents who can respect themselves and will not have risky sexual relations when they are not married or immature. Education and instilling values regarding sexual attitudes in adolescents are very necessary in dealing with at-risk adolescent sexual behavior. However, this result is in line with research that is done by Lestari [21] which stated that there is no correlation between adolescent attitudes to adolescent sexual behavior because there are no significant differences regarding attitudes and adolescent sexual behavior. Attitudes towards behavior are influenced by behavioral beliefs that individuals have towards a result of behavior and the evaluation or results that are carried out. This attitude is included in the response-oriented attitude, where attitude is a form of feeling that supports and takes sides. This can be formed by a strong intention to form a positive or negative attitude.

In this study, there were respondents who had a high attitude but had moderate sexual behavior, which is 43.5%. Even though statistically, there is no effect of attitudes on sexual behavior, it is probably because the courtship process is no longer the main orientation for someone to find a life partner but only for having fun, so it is not an outdated thing. This study shows that there are respondents with a high attitude towards sexual behavior who have moderate spiritual beliefs, which is 52.3%. Hormonal changes increase adolescent sexual desire in channeling their desires. However, legally, socially, and religiously, it prohibits a person from having sexual relations before marriage. Only teenagers who cannot restrain themselves will tend to violate these prohibitions [36,37].

This study also showed that there are 52.3% of respondents who had a high attitude towards risky sexual behavior. At the same time, men who have a high attitude toward sexual behavior amounted to 47.7%. This is because men have more freedom to behave more liberally and sexually than women. Many women engage in sexual activities with partners they trust and are ready for married life, even though their partners do not have an attitude like them as well [38]. This is because if a woman already has a lover, it will be easier for her to believe promises from men who are good at seducing women and making sweet promises even without certainty [39].

The Influence of Adolescent Parenting Patterns on Adolescent Sexual Behavior

Based on research results show that a direct effect, which is the Influence of parenting patterns on adolescent sexual behavior, is 0.004 ($p < 0.05$), which can be interpreted as an influence on parenting patterns on adolescent sexual behavior. The results of the statistical analysis also show that the R-square value is 0.067, which means that 6.7% of the parenting pattern variable influences adolescent sexual behavior, while the remaining 94.5% is influenced by other

variables. This is in line with research from Rahman et al. [40], which shows positive parental involvement in adolescents can help adolescents avoid deviant behavior, one of which is risky sexual behavior that can harm them. Teenagers really need to get consistent supervision or monitoring from their parents. The disciplining of parents in adolescents is very necessary, along with commitment and negotiation between parents and adolescents, in determining the rules that apply in a positive direction. If teenagers do positive things, then appreciation and praise in the form of goods or affection, greeting, or praise will sincerely affect the sense of appreciation in adolescents. However, if negative behavior is carried out by adolescents, then according to the commitment, the adolescent dares to accept responsibility for the behavior that has been carried out.

In this study, it is found that respondents who had moderate parenting patterns were mostly respondents aged 16 years old, which is the age of just entering high school, which is 33.5%. When children reach adolescence, the role of parents tends to decrease, and they will turn to their friends/colleagues who tend to have information about sex, so at that age, teenagers tend to act secretly and share less information with their parents [41]. In addition, with age, parental monitoring of their children's activities decreases, as does parental regulation and support [42]. Widyanti and Jatningsih [43] stated that adolescents aged 16-18 years monitored by their parents regarding their activities have a direct impact on their sexual activity and behavior.

This study found that 89.4% of the parenting patterns of parents are owned by male respondents. This is because men are given higher autonomy and experience less interaction with those closest to them, such as parents and family, compared to women. Thus affecting the intention and decision on sexual behavior [44]. In this study, it is also found that respondents with moderate parenting patterns had moderate attitudes toward sexuality, which is 38.3% of respondents. This is because adolescence is a time when they are curious and try big things due to their sexual urges. They spend twice as much time with friends than with their parents, which influences their attitudes towards sexual activity [45]. Parents should instill good moral values in their children; for example, if a man visits a woman's house, parents must supervise them properly [46].

The Influence of Spiritual Beliefs on Adolescent Sexual Behavior

Table 3 shows the direct effect, which is the Influence of spiritual beliefs on adolescent sexual behavior, which is 0.005 ($p < 0.05$), which means that there is an influence of Spiritual beliefs on adolescent sexual behavior in Banjarbaru City. The results of the statistical analysis also show that the R-square value is 0.065, which means that 6.5% of the spiritual belief variable influences adolescent sexual behavior, while the remaining 94.5% is influenced by other variables. This is in line with research conducted by Pulungan et al. [18], which states that a person with good spiritual or religious beliefs will be lower and can even prevent risky sexual behavior. Understanding of religious values is then internalized into him. The existence of religious experience will make feelings that always arise become internal controls and deviant behaviors such as risky sexual behavior can be avoided and prevented.

In this study, it was found that respondents who had confidence in their beliefs were dominated by good beliefs 32%, and respondents who were quite good at practicing their beliefs 48%. Wahyuningsih [47] stated that religious feelings or the level of belief and attendance at places of worship make a person have fewer and lower opportunities to engage in sexual behavior. Good religiosity that is had by a person will be a protective or protective factor that can control a person from deviating behavior. According to Darmawan and Wardhaningsih [34], adolescents who have sexual activity before marriage show a decrease in their spiritual level.

This study found that respondents with moderate spiritual beliefs had moderate knowledge, which is 88.5%. Problems of sexuality are not only influenced by the level of spirituality that adolescents have but also because of the knowledge obtained from various information due to

the hormonal changes they experience that are caused by an increase in their sexual desire. Delaying the age of marriage and the prevailing religious norms in society that forbid having sex before marriage make teenagers unable to refrain from doing this sexual behavior [48].

The Influence of Knowledge, Attitudes, Parenting Patterns, and Spiritual Beliefs on Adolescent Sexual Behavior

Based on research results show that the direct effect is 0.014 ($p < 0.05$), which means that simultaneously, knowledge, attitudes, parenting patterns, and spiritual beliefs have an influence on adolescent sexual behavior in Banjarbaru City. The results of the statistical analysis also show that the R-square value is 0.122, which means that 12.2% simultaneously the variables of knowledge, attitudes, parenting, and spiritual beliefs influence adolescent sexual behavior, while the remaining 87.8% are influenced by other variables that do not include in this research model.

Wrong knowledge and understanding about sexuality in adolescents make them try to experiment with sex problems without realizing the dangers that will arise from their actions, and when problems caused by their sexual behavior begin to emerge, adolescents feel afraid to express these problems to their parents [23].

Attitude is a form of evaluation or reaction of feeling favorable or unfavorable towards an object. Attitudes have direction, which is agreeing or disagreeing with an object. Adolescents who increasingly agree with or support reproductive health mean that these adolescents have a positive attitude, and vice versa. In this case, it can be interpreted that if adolescents have a high positive attitude, then these adolescents have a positive attitude towards various types of sexual behavior [49].

Parenting patterns that tend to liberate their children so that parents give more freedom without providing more supervision result in children acting aggressively, being independent, and tending to be less able to place themselves in social circles, thus encouraging adolescents to engage in risky sexual behavior [50]. A person who has a strong level of faith will always feel that God is watching everything that is done, either secretly or openly, and believes that there is a penalty for every violation committed both in this world and in the hereafter [51].

The Influence of Adolescent Intentions on Adolescent Sexual Behavior

Based on research results show that the direct effect, which is the Influence of intention on adolescent sexual behavior, is 0.111 ($p > 0.05$), which means that there is no influence of intention on adolescent sexual behavior. This result is not in line with research conducted by Hadi and Winarti [20], which states that adolescents who have the intention to engage in premarital sex have a greater chance of having premarital sex. Intention has a big impact on having premarital sex. This intention is the main key to the occurrence of sexual relations and is the most powerful predictor in influencing the initiation of premarital sex in adolescents.

In this study, it is found that 84.5% of respondents with a high intention to behave sexually had moderate knowledge. This is due to the knowledge of adolescents who think that sexual behavior is just intercourse; they think it is okay to do other sexual activities, such as holding hands, hugging, and kissing so that the intention to behave defiantly remains with them [52].

This study also found that respondents with high sexual behavior intentions are dominated by men, which is 54.4%. This is because men are given higher rights and experience less interaction with those closest to them (such as parents and family) compared to women, so this affects intentions and decisions on sexual behavior, where more men than women express their intention to practice or have sexual relations in the next few months [44].

The Influence of Adolescent Knowledge on Adolescent Sexual Behavior Intervened by Intention Banjarbaru City

Based on Table 3, the results show that the indirect effect is 0.195 ($p > 0.05$), so it can be interpreted that intention is not significant to be an intervening variable (mediation) on knowledge of adolescent sexual behavior. This is not in line with the theory of planned behavior, which states that a person's intention to perform a behavior is an indication of the tendency of the individual to perform a behavior [53].

This study states that intention is not able to be an intervening variable that influences knowledge of adolescent sexual behavior. Usman et al. [54] stated that knowledge is obtained from a person's desire to find out something by sensing. When a person does not have sufficient knowledge, it will directly influence respondents to engage in sexual behavior even without going through behavioral intentions, with the level of knowledge that adolescents have spontaneously and without thinking twice about doing negative things such as risky sexual behavior. This can be caused by access to information such as social media, which has a negative impact on teenagers. Therefore, policies regarding reproductive health and risky sexual behavior education are very much needed for adolescents so that they get clear and correct information about sexual behavior.

The Influence of Adolescent Attitudes to Adolescent Sexual Behavior Intervened by Intention in Banjarbaru City

Based on research results show that the result of the indirect effect is 0.261 ($p > 0.05$), so it can be interpreted that intention is not significant as a mediation between attitudes towards adolescent sexual behavior. This is not in line with the Theory of Planned Behavior, which states that a person's intention to do something occurs because there is a direct antecedent of existing behavior, which is the intention of that person [53].

A person's intention to behave should appear when there are attitudes and beliefs in behaving, but this study states that intention is not able to become an intervening variable that influences attitudes towards adolescent sexual behavior. Sari [55] stated this is because there are still negative and unstable attitudes about sexual behavior in teenagers, so if there is an opportunity, even without any intention, they will experience bad behavior, such as risky sexual behavior. Therefore, instilling an attitude of awareness in adolescents from an early age and in full regarding risky sexual behavior is very necessary in order to avoid sexual behavior that can have bad consequences for adolescents, such as joining or participating in youth communities that have positive activities.

The Influence of Parenting Patterns on Adolescent Sexual Behavior Intervened by Intentions in Banjarbaru City

Based on research results shows that the indirect effect is 0.209 ($p > 0.05$) so that it can be interpreted that intention is not significant as a mediation between parenting patterns to adolescent sexual behavior. This is not in line with the Theory of Planned Behavior, which shows that if an individual has the intention to perform a behavior, then the individual tends to do that behavior. Conversely, if the intention does not exist, then the individual tends not to perform a certain behavior [53].

In terms of the Theory of Planned Behavioral parenting, it is part of subjective norms where subjective norms are individual perceptions of social influences in shaping certain behaviors. In subjective norms, there are individuals who influence a person's behavior. One of these individuals is a parent. Because according to Husna and Hamdan [56], parents have an important role in the process of their child's development. Parenting is the most prominent or

dominant parental behavior in dealing with children on a daily basis, including disciplining children, instilling life values, and teaching life skills.

In this study, a person's intention to behave, which should tend to arise when there is social influence, one of which is from parents in behaving, is unable to become an intervening variable that influences parenting patterns on adolescent sexual behavior. The lack of parental figures who provide affection, supervision, and other positive things will directly influence respondents to engage in sexual behavior even without going through behavioral intentions. In this case, parents should be more assertive in implementing prohibitions regarding conditions that allow adolescents to have the opportunity to engage in risky sexual behavior [57].

The Influence of Spiritual Beliefs on Adolescent Sexual Behavior Intervened by Intention Banjarbaru City

The results shows that the indirect effect is 0.435 ($p > 0.05$) so that it can be interpreted that intention is not significant as a mediation between spiritual beliefs to adolescent sexual behavior. This is not in line with the Theory of Planned Behavior, which states that if a person performs a behavior, then that person has an indication of an intention to do so [53].

Spiritual belief in the Theory of Planned Behavior is part of the emergence of control over this behavior, which is a belief about the existence of things that support or hinder the behavior from being carried out and perceptions of how strong the things that support and inhibit this behavior are. However, in this study, intention cannot be an intervening variable that influences spiritual beliefs in adolescent sexual behavior, even with control over this behavior.

Spirituality that is not good enough and not strong enough to be possessed by the respondent will directly influence them to engage in sexual behavior even without going through the intention to behave. According to Amaruddin et al. [58], this is due to a lack of supervision from the family and the surrounding environment in instilling religious and spiritual values that can fortify adolescents to avoid bad behaviors such as adolescent sexual behavior. Therefore, the role of religious leaders is needed so that adolescents can avoid sexual behavior before the right time.

The Influence of Knowledge, Attitudes, Parenting Patterns, and Spiritual Beliefs on Adolescent Sexual Behavior Intervened by Intention in Banjarbaru City

Table 3 shows an indirect effect of 0.288 ($p > 0.05$), which means that intention is not significant in mediating between knowledge, attitudes, parenting patterns, and spiritual beliefs to adolescent sexual behavior.

Knowledge has a very large impact on adolescent sexual behavior; knowledge about adolescent sexuality is the basis for encouraging students to behave not at risk in terms of sexuality. Factors that affect knowledge are usually due to educational factors and information. Information obtained by adolescents can be from formal information and informal information. Teenagers have a correct and proportional understanding if they gain knowledge about adolescent sexual behavior [31].

Attitude actually shows the connotation of the appropriateness of the reaction to certain circumstances. The more negative the adolescent's attitude toward sexual behavior, the greater the intention to engage in sexual behavior; conversely, if the adolescent has a positive attitude toward sexual behavior, the smaller the intention to engage in sexual behavior [35].

Fulfillment of physical and psychological needs including the norms of life and behavior are very necessary for adolescents which they can get from their parents. Therefore, a good pattern of interaction between parents and their children is needed in order to obtain a feeling of comfort

for adolescents. Adolescents who have parents who play an active and good role have the potential not to engage in risky sexual behavior [40].

Spiritual belief is a dimension of the core of humanity that strives to achieve meaning, purpose, and connectedness with oneself, others, and God, whereas adolescents with a high level of spiritual well-being, goal stability, and life satisfaction will have a higher level of personal responsibility, believe that have direct control over the outcomes in their lives, have better control over their environment and have less anxiety, tension, fear, and anxiety, tend to be physically healthy and not engage in risky sexual behavior before marriage and before adulthood because of their closeness to God compared to adolescents who have spiritual well-being, stability of purpose and lower life satisfaction [18].

Ajzen [59] stated that one of the significant predictors of risky sexual behavior in adolescents is intention. Intentions or intentions have a high probability of influencing adolescents to engage in risky sexual behavior. The existing intention is the main key for adolescents in carrying out negative behavior, in this case, risky sexual behavior. However, in the results of this study, even without the intention to engage in sexual behavior, several variables have and have been able to influence respondents directly in carrying out this sexual behavior. This is because there are still teenagers with insufficient knowledge in obtaining information correlated to risky sexual behavior, there are teenagers who still have negative attitudes and thoughts about sexual behavior, teenagers who do not receive strict supervision and discipline from their parents, and lack of spiritual values in adolescents, those all are causing them to be able to engage in risky sexual behavior that could be bad for them.

Conclusions

This study reveals a significant influence of knowledge, parenting patterns, and spiritual beliefs on adolescent sexual behavior in Banjarbaru City, whereas attitudes and intentions exhibit no direct impact. However, when considering all factors collectively, including knowledge, attitudes, parenting patterns, and spiritual beliefs, they collectively contribute to shaping adolescent sexual behavior in the city. Despite the lack of direct influence, attitudes toward sexual behavior are intertwined with moderate spiritual beliefs among respondents. The findings also underscore the impact of hormonal changes on teenagers' sexual desires, juxtaposed with societal and religious norms prohibiting premarital sexual relations. The absence of a direct effect of intention on adolescent sexual behavior can be attributed to teenagers' perceptions of sexual behavior extending beyond intercourse, leading to a persistence of defiant intentions. Thus, the study underscores the complex interplay of factors shaping adolescent sexual behavior in Banjarbaru City, highlighting the need for comprehensive approaches in addressing this issue.

Funding: This research was funded using independent funds.

Ethical Clearance: This research has been approved by the Health Research Ethics Committee of the Faculty of Medicine, Lambung Mangkurat University No.110/KEPK-FK ULM/EC/VI/2023.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study. Written informed consent has been obtained from the patient(s) to publish this paper.

Data Availability Statement: The data is confidential, so it is not available other than the data results listed in this article.

Acknowledgments: We would like to express our thanks to all respondents In Banjarbaru City who were willing to become respondents and to the local government who gave us permission.

Conflicts of Interest: All the authors declare that there are no conflicts of interest.

References

- [1] McClure M. Adolescence—the Transition from Childhood to Adulthood. *Fam. Matters*, Routledge; 2005, p. 71–82.
- [2] Anderson S, Asmiyati AH. Gambaran Pengetahuan Remaja Tentang Perilaku Seksual Pranikah Di Sekolah Menengah Atas. *Jurnal Medika Utama* 2021;2:439–47.
- [3] Mutiawati M, Syahputra A, Nelly N, Yusian DR, Lestari S, Rusyidah R, et al. Using the Flipped Classroom Model to Prevent Sexual Violence in Special Needs Children. *Journal of Educational Management and Learning* 2023;1:55–63. <https://doi.org/10.60084/jeml.v1i2.107>.
- [4] Hasanah R. Kenakalan Remaja Sebagai Salah Satu Bentuk Patologi Sosial (Penyakit Masyarakat). *Jurnal Cakrawala Ilmiah* 2021;1:343–54.
- [5] Dini D, Budinurdjaja P, Nugroho A, Istiqomah E, Fatimah H. Exploring Determinants of Early Marriage Among Adolescent Girls in Banama Tingang, Indonesia. *Heca Journal of Applied Sciences* 2024;2:11–8. <https://doi.org/10.60084/hjas.v2i1.146>.
- [6] Marwoko G. Psikologi Perkembangan Masa Remaja. *Tasyri: Jurnal Tarbiyah-Syariah-Islamiah* 2019;26:60–75.
- [7] Suzana M. Sosialisasi Persepsi Remaja Tentang Body Image Dan IMT Di SMAN 2 Kota Sungai Penuh. *Jurnal Pengabdian Masyarakat Bina Insani Sakti* 2022;1:21–7.
- [8] Women UN, UNICEF. *International Technical Guidance on Sexuality Education: An Evidence-Informed Approach*. UNESCO Publishing; 2018.
- [9] Kemenkes RI. Riset Kesehatan Dasar (Riskesdas) Badan Penelitian dan Pengembangan Kesehatan Kementerian RI Tahun 2018 2018.
- [10] World Health Organization. Deafness and Hearing Loss 2018. <http://www.who.int/mediacentre/factsheets/fs300/en/> (accessed January 4, 2018).
- [11] Hurlock EB. *Psikologi Perkembangan: Suatu Pendekatan Sepanjang Rentang Kehidupan*. Jakarta: Erlangga; 1990.
- [12] Notoadmodjo S. *Promosi Kesehatan Dan Ilmu Perilaku*. Jakarta: Rineka Cipta; 2018.
- [13] Sari RM. Faktor-Faktor Yang Berhubungan Dengan Perilaku Seksual Pranikah Pada Remaja SMKN 3 Kabupaten Lebong. *Jurnal Ners Lentera* 2020;8:35–47.
- [14] Nurdianti R, Marlina L, Sumarni S. Hubungan Pengetahuan Dengan Perilaku Seksual Pada Remaja Di SMK MJPS 1 Kota Tasikmalaya. *Healthcare Nursing Journal* 2021;3:90–6. <https://doi.org/10.35568/healthcare.v3i1.1094>.
- [15] Tungka KE, Nursalam N, Fitriyarsi R. Faktor Risiko yang Mempengaruhi Perilaku Seksual Pranikah Remaja. *Journal of Telenursing (JOTING)* 2022;4:781–94. <https://doi.org/10.31539/joting.v4i2.4115>.
- [16] Putri R, Devi VS, Nurisa E, Jannah M. Literature Review Pengaruh Komunikasi antara Orang Tua dan Remaja tentang Kesehatan Reproduksi terhadap Perilaku Seksual Remaja: Literature Review Pengaruh Komunikasi antara Orang Tua dan Remaja tentang Kesehatan Reproduksi terhadap Perilaku Seksual Remaj. *Jurnal MID-Z (Midwivery Zigot) Jurnal Ilmiah Kebidanan* 2021;4:52–66.
- [17] Setyowati S, Hakim N. Spiritualitas dan tingkat pengetahuan HIV/AIDS dengan perilaku seksual pranikah nelayan di Yogyakarta. *JHeS (Journal of Health Studies)* 2019;3:88–95.
- [18] Pulungan F, Humaira W, Sri Yanti H. Pengaruh Religiusitas Terhadap Perilaku Seks Pranikah Remaja Di Prodi D-III Kebidanan Jurusan Kebidanan Poltekkes Kemenkes Medan 2020.
- [19] Fitriani H, Suwarni L, Hernawan AD. Determinan Perilaku Seks Pranikah Remaja di Kota Pontianak Tahun 2019. *Jurnal Vokasi Kesehatan* 2019.
- [20] Hadi SS, Winarti Y. Hubungan Intensi Berperilaku Seks Pranikah Dengan Inisiasi Seks Pranikah di Remaja S1 Farmasi Universitas Muhammadiyah Kalimantan Timur. *Borneo Studies and Research* 2021;2:1162–9.
- [21] Lestari IA. Faktor-Faktor Yang Berhubungan Dengan Perilaku Seks Pranikah Pada Mahasiswa Unnes. *Unnes Journal of Public Health* 2014;3.
- [22] Masni HSF. Determinan of Sexual Behavior Risk in Adolescent Makassar (Case Study on Students of MA Darul Arqam Gombara and SMAN 6). *J Media Kesehat Masy Indones* 2018;14:68–77.
- [23] Fekadu Wakasa B, Oljira L, Demena M, Demissie Regassa L, Binu Daga W. Risky Sexual Behavior and Associated Factors among Sexually Experienced Secondary School Students in Guduru, Ethiopia. *Preventive Medicine Reports* 2021;23:101398. <https://doi.org/10.1016/j.pmedr.2021.101398>.
- [24] Lin W-H, Liu C-H, Yi C-C. Exposure to Sexually Explicit Media in Early Adolescence Is Related to Risky Sexual Behavior in Emerging Adulthood. *PLOS ONE* 2020;15:e0230242. <https://doi.org/10.1371/journal.pone.0230242>.
- [25] BKKBN. *Survei Demografi dan Kesehatan Indonesia 2017*. 2018.

- [26] South Kalimantan Provincial Health Service. Data IMS dan Perilaku Seksual Remaja di Kalimantan Selatan Tahun 2022. Banjarmasin: Dinas Kesehatan Provinsi Kalimantan Selatan; 2022.
- [27] Purnama Y. Faktor Penyebab Seks Bebas Pada Remaja. *Syntax Literate; Jurnal Ilmiah Indonesia* 2020;5:156–63.
- [28] Banjarbaru City Religious Court. Data on Reasons for Early Marriage Dispensation in 2022. Banjarbaru: Banjarbaru City Religious Court; 2022.
- [29] Suryawati S, Rasydi A, Puspita NA, Hertiani T. Investigating the Usage of Medicinal Plants and Herbal Products in Aceh to Address COVID-19 Symptoms: A Cross-Sectional Survey. *Malacca Pharmaceutics* 2023;1:37–42. <https://doi.org/10.60084/mp.v1i2.38>.
- [30] Sasmita NR, Ramadeska S, Utami R, Adha Z, Putri U, Syarafina RH, et al. Maternal and Child Healthcare Services in Aceh Province, Indonesia: A Correlation and Clustering Analysis in Statistics. *Infolitika Journal of Data Science* 2023;1:22–31. <https://doi.org/10.60084/ijds.v1i1.88>.
- [31] Fathona S, Hartini L, Yuniarti Y, Mizawati A, Sapitri W. Hubungan Tingkat Pengetahuan Dan Sikap Remaja Dengan Perilaku Tiga Ancaman Dasar Kesehatan Reproduksi Remaja (TRIAD KRR) Pada Siswa Di SMA Negeri 10 Kota Bengkulu Tahun 2021 2021.
- [32] Satria D. Penyuluhan Komunikasi dalam Antisipasi Efek Negatif Pemaparan Pornografi di Media Online dan Pengaruhnya Terhadap Perilaku Generasi Milenial Desa Sungai Ulak. *Vox Populi: Jurnal Umum Pengabdian Kepada Masyarakat* 2024;1:29–49.
- [33] Robi'i Pahlawan HR, Wijayanti AC. Hubungan antara Pengetahuan dan Paparan Media Massa dengan Perilaku Pacaran Remaja. *Kes Mas: Jurnal Fakultas Kesehatan Masyarakat* 2018;12:60–7.
- [34] Darmawan AI, Wardhaningsih S. Peran Spiritual Berhubungan dengan Perilaku Sosial dan Seksual Remaja. *Jurnal Keperawatan Jiwa* 2020;8:75.
- [35] Theresia F, Tjhay F, Surilena S, Widjaja NT. Faktor-Faktor yang Mempengaruhi Perilaku Seksual Siswa SMP di Jakarta Barat. *Jurnal Kesehatan Reproduksi* 2020;11:101–13.
- [36] Putra PH, Erniyati Y. Sex Education in Islamic Education Perspective. *AJIS* 2022;7.
- [37] Kumalasari N, Kuswardinah A, Deliana SM. The Influence of Reproductive Health Education to Knowledge and Percieved Behavior Sexual Adolescent Control. *Public Health Perspective Journal* 2020;5.
- [38] Haryadi R, Simangunsong BA. Fenomena Pengalaman Perempuan dalam Menggunakan Feminist Mobile Dating App Bumble. *KOMUNIKATIF: Jurnal Ilmiah Komunikasi* 2022;11:76–89.
- [39] Kleinknecht J. A Man of His Word? An Experiment on Gender Differences in Promise Keeping. *Journal of Economic Behavior & Organization* 2019;168:251–68. <https://doi.org/10.1016/j.jebo.2019.10.008>.
- [40] Rahman MA, Pramudiani D, Raudhah S. Pengaruh Pengasuhan Orangtua pada Perilaku Seksual Pranikah Remaja. *Jambi Medical Journal: Jurnal Kedokteran Dan Kesehatan* 2021;9:8–18.
- [41] Wang, Stanton, Deveaux, Li, Lunn. Dynamic Relationships Between Parental Monitoring, Peer Risk Involvement and Sexual Risk Behavior Among Bahamian Mid-Adolescents. *International Perspectives on Sexual and Reproductive Health* 2015;41:89. <https://doi.org/10.1363/4108915>.
- [42] Wang M-T, Dishion TJ, Stormshak EA, Willett JB. Trajectories of Family Management Practices and Early Adolescent Behavioral Outcomes. *Developmental Psychology* 2011;47:1324–41. <https://doi.org/10.1037/a0024026>.
- [43] Widyanti YE, Jatningsih O. Peran Orang Tua dalam Mencegah Pergaulan Bebas Anaknya Desa Sudimoro Kecamatan Tulangan Kabupaten Sidoarjo. *Kajian Moral Dan Kewarganegaraan* 2022;11:32–48. <https://doi.org/10.26740/kmkn.v11n1.p32-48>.
- [44] Muhammad N, Tohid H, Omar K, Mohd. Amin R, Shamsuddin K. Gender Difference in the Influence of Family Interaction and Parenting Behaviours on Youth Sexual Intention. *Social Sciences* 2017;6:105. <https://doi.org/10.3390/socsci6030105>.
- [45] Adam A. Dinamika Pernikahan Dini. *Al-Wardah* 2020;13:14.
- [46] Sudarsono S, Amin S, Rajab A. Peranan Orang Tua dan Guru dalam Mengatasi Degradasi Moral Anak di Sekolah MA Muhammadiyah Pokobulo. *Jurnal Studi Guru Dan Pembelajaran* 2021;4:437–45.
- [47] Wahyuningsih S. Bimbingan Keagamaan Dalam Meningkatkan Kesadaran Beragama Di Sekolah Masjid Terminal (MASTER) Depok 2022.
- [48] Milner M. Teenage Behavior: It's Not Biology, Psychology, or Family Values. *Educational Horizons* 2006;84:240–6.
- [49] Nisariati N, Kusumaningrum T. Hubungan Pengetahuan, Sikap dan Self Efficacy dengan Sexual Abstinence pada Remaja. *Jurnal Kesehatan* 2022;15:214–23.

- [50] Coley RL, Votruba-Drzal E, Schindler HS. Fathers' and Mothers' Parenting Predicting and Responding to Adolescent Sexual Risk Behaviors. *Child Development* 2009;80:808–27. <https://doi.org/10.1111/j.1467-8624.2009.01299.x>.
- [51] Sari SS, Alfatah AI. Nilai-Nilai Pendidikan Tauhid Perspektif Syekh Ahmad Al-Marzuki dalam Kitab Aqidatul Awam. *Jurnal Islam Nusantara* 2021;5:102–16.
- [52] Pratama AY, Putra SDE, Shofa AMA, Saputra M. Pendidikan Seksual Komprehensif: Standar Materi Dalam Perspektif Indonesia. *Suluh Kato Khatulistiwa*; 2023.
- [53] Ajzen I. The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes* 1991;50:179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).
- [54] Usman SA, Rokhim S, Cahya WD. Hubungan Tingkat Pengetahuan Remaja tentang Maloklusi dengan Minat Penggunaan Alat Ortodonti Cekat di SMA Negeri 7 Balikpapan. *Mulawarman Dental Journal* 2024;4:32–41.
- [55] Sari YP. Peran Orang Tua dalam Mengatasi Perilaku Menyimpang Remaja Akibat Game Online Higgs Domino di Kelurahan Padang Kapuk Bengkulu Selatan 2022.
- [56] Husna SM, Hamdan SR. Peran Religiusitas Dalam Penerimaan Orangtua Anak Berkebutuhan Khusus. *Prosiding Psikologi*.
- [57] Noor MS, Fatimah H, Rahman F, Laily N, Yulidasari F. The Impact of Physical and Psychological Health of Early Married Behaviors in Adolescents. *Jurnal Berkala Kesehatan* 2021;7:16. <https://doi.org/10.20527/jbk.v7i1.9618>.
- [58] Amaruddin H, Atmaja HT, Khafid M. Peran Keluarga Dan Media Sosial Dalam Pembentukan Karakter Santun Siswa Di Sekolah Dasar. *Jurnal Pendidikan Karakter* 2020;11.
- [59] Ajzen I. *Attitudes, Persoality and Behavior*. Berkshire: Open University Press-McGraw Hill Education; 2005.