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Original Article

Application of Health Belief Model (HBM) on Sexual Behavior in Teens in Senior High School 3 Pasundan Cimahi

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Abstract

Adolescent growth and development is a process or stage of change or transition from childhood to adulthood marked by various changes, including physical changes. One of the prominent characteristics of the physical changes in the active operation of the sex glands is a sexual urge. Adolescent sexual behaviour can also have psychological and social impacts. To avoid unhealthy sexual behaviour, efforts are made to prevent adolescent sexual behaviour that can be done internally and externally. Internally, the factor that plays an important role for adolescents in preventing sexual behaviour is self-control. The self-control factors can be studied with Health Belief Model (HBM) approach using a psychological model to predict the causes of healthy behaviour. This research method is a quantitative research using a quasi-experimental research with the type of design one group pre and post intervention. The results showed that sexual behavior before the implementation of HBM was unhealthy with a median value of 1, after the implementation of HBM, adolescent sexual behavior was healthy with a median value of 0. This indicates that there is a relationship between the application of HBM and adolescent sexual behavior in SMK Pasundan 1 Cimahi with p-value 0.002. The application of HBM can reduce unhealthy sexual behavior as a guide for adolescents in increasing knowledge, providing information to increase understanding of healthy sexual behavior.

Keywords
Adolescents, Health Belief Model (HBM), Sexual Behavior.

INTRODUCTION

Adolescence is a period of transition from childhood to adulthood. In this definition, three criteria are stated, namely biological, psychological, and socio-economic (1). The characteristics of physical changes in adolescents are the work that supports sex becomes a sexual behaviour. This sexual drive is linked to sexual behaviour. Adolescents generally experience a surge in libido due to physical changes at puberty, therefore if it is not equipped with sexual knowledge and is fortified with morals, adolescents with high libido tend to engage in sexual activity, leading to irresponsible sexual behavior (2). Sexual behaviour is supported by sexual behavior, both with the opposite and the same sex. The behavior forms cover from feelings of

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attraction to behaviors of dating, making out, and having sex. Other people, imaginary people, or oneself can be used as a sexual object (1).

Sexual behaviour in adolescents can be manifested by several behaviours such as feelings of attraction, dating, holding hands, kissing cheeks, hugging, kissing lips, holding breasts over clothes, holding breasts underclothes, holding genitals underclothes, and engaging in intercourse (3), While the forms of sexual behaviour are kissing, masturbation, partner masturbation, fingering (using fingers to stimulate partner's genitals), foreplay (activities that lead to sexual intercourse), oral sex, non-penetrative sex (petting), penetrative sex (inserting fingers, sex toys, or penis into partner's vagina or anus), and vaginal sex (inserting a penis into the vagina as part of the human reproductive activity) (4). Oral sex, vaginal sex, and anal sex are also included in penetrative sex (4).

Sexual behaviour can be considered normal and healthy if it is done heterosexually, vaginally, and consensually in a marriage bond, while those that are not normal or risky include homosexuality, changing partners, masturbation, and premarital sex behaviour (5). Premarital sexual behaviour occurs because adolescents cannot easily fulfill sexual demands immediately. After all, marriage is only permitted after years of sexual maturity. Sex is an urge that is often blocked or hindered, which is a source of conflict and frustration in adolescents (6).

The incidence of sexual behaviour in adolescents is very concerning. The data obtained by high school students in America who had premarital sexual intercourse was as much as 47%, had sexual intercourse in the previous 3 months as much as 34%, and students who had had sexual intercourse with more than 4 people were 15% (Center for Disease Control and Prevention, 2014). The Indonesian Child Protection Committee and the Ministry of Health explained in October 2013 that around 62.7% of adolescents in Indonesia have had sex outside of marriage. 20% of the 94,270 pregnant women out of wedlock also belong to this age group and 21% of these have had an abortion. Based on the 2017 Indonesian Health Demographic Survey (IDHS), the percentage of never-married women who have had sexual intercourse aged 15-19 years is 6,750 people (0.9%) and men as many as 7,713 people (3.6%).

Adolescent sexual behavior can have physiological, psychological, and social impacts. Physiological impacts of premarital sexual behavior include unwanted pregnancy, abortion, risk of sexually transmitted diseases, and if adolescents have sex with multiple partners the risk of contracting Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome (HIV / AIDS) (7). According to Sebayang (2018) the impact of unhealthy sexual behavior on adolescents is that the risk of contracting diseases, especially STDs (Sexually Transmitted Diseases), is increasing, such as syphilis, gonorrhea, herpes simplax (genetic), chlamydia, HIV/AIDS, adolescent girls. threatened with KTD (Unwanted Pregnancy), termination of pregnancy or abortion, infection in the reproductive organs, anemia, infertility, and even death due to bleeding or pregnancy poisoning. Psychological trauma such as depression, guilt, low self-esteem and loss of hope for the future. Get the opportunity to lose the opportunity to continue education and the opportunity to work.

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Efforts to prevent unhealthy sexual behavior can be carried out by providing information about reproductive health, due to the lack of knowledge about reproductive health including about sex, encouraging adolescents to seek the information themselves. With the availability of correct and accurate information about reproductive health, it can minimize unhealthy sexual behavior, provide facilities for developing talent, as well as positive activities so that teenagers will focus on positive activities and create a strong, conducive and informative family environment. Because there are still many teenagers who are reluctant to ask about sex to their parents (8).

In line with (9), a teenager must have the ability to control his behavior, not just following the wishes of others that are against his wishes or with the rules that apply in society. External prevention by providing a peer social environment that can influence positive or negative behavior. The positive influence in question is when individuals and their peers carry out useful activities. While the negative influence can be in the form of violations of social norms including premarital sexual behavior.

Factors related to self-control can be seen using the Health Belief Model (HBM) approach. HBM is a psychological model that is used to predict the causes of healthy behavior 10). HBM can be applied to explore various health behaviors in the long and short term, including sexual behavior. HBM can be done to prevent free sex behavior in adolescents (10).

HBM focuses on a person's subjective perceptions, including a person's perception of the risk of contracting the disease (perceived susceptibility), in this case, the impact of free sex behavior; someone's perception of the seriousness of an illness, both medical and social, such as death, being excluded from friends and family (Perceived severity); positive perceptions of preventive behavior (perceived benefits), negative perceptions of perceived barriers; Perceptions of expectations include perceived benefits, perceived barriers, self-efficacy, and cues to action and perceptions of one's own ability to perform preventive behavior (perceived self-efficacy), namely self-control (Barus, 2017). This study aims to determine the Health Belief Model (HBM) application to adolescent sexual behaviour.

METHODS

This research is a quantitative study using a quasi-experimental research design with the one-group pre-post intervention design type. This research was conducted for 4 months from September to December 2019. The population in this study were class X students who were actively enrolled in SMK Pasundan 1, Cimahi City, as many as 233 students from 8 classes.

The data collection instrument used in the study was a questionnaire in the form of sheet. In collecting this data, respondents are given the freedom to fill in the appropriate answers according to the respondent and a questionnaire in the form of choices, where answers have been provided so that the respondent only needs to choose the answer (11).

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The data collection method in this study was obtained directly from the respondents using a questionnaire tool. In the first stage, after the research socialization was carried out to the school, informed consent was distributed and after all, respondents were willing to be involved as research samples, they immediately started the HBM implementation intervention with health counseling to the intervention group, after 1 month after the counseling an assessment of sexual behavior would be carried out by distributing questionnaires. After completing the questionnaire by the respondents, it was collected at the same time and checked for completeness of the answers, after which the researchers analyzed.

The Health Belief Model questionnaire was arranged into question items which were divided into four parts, namely filling instructions, respondent identity, adolescent sexual behavior, and HBM in the form of a closed statement using a Likert scale (for which the answer was available) which aims to determine adolescent behaviour in high school students 3 Pasundan Cimahi.

The HMB questionnaire consists of Perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy measured using a questionnaire compiled by the researcher himself based on the HBM component proposed by Hayden (2009). In this study, researchers only used four Likert Scale answer choices, namely Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS). The statements on this scale are positive, namely, statements that support the object of attitude with a weighted value of SS = 4, S = 3, TS = 2, and STS = 1 and negative, namely statements that are anti-object attitude with a weighting value of SS = 1, S = 2, TS 3, and STS 4.

The instrument has been tested for validity at SMA Negeri 1 Bantarujeg, Majalengka Regency on July 1, 2018, on 20 high school students. validity test results obtained the smallest r count (r Pearson) 0.483 ≥ r table (0.444) so that all question items in the HBM questionnaire instrument were declared valid. The reliability test results showed that the Cronbach's alpha value was 0.946 ≥ r table (0.683), so the HBM questionnaire was declared reliable to be used as a research instrument.

Data analysis in the study used univariate analysis using the median. Bivariate analysis using Wilxocon. After the data normality test results were carried out using the Shapiro-Wilk (n <50) with the results of the pretest and posttest significance values of 0.0001 less than 0.05. Then the decision in the normality test can be concluded that the pretest and posttest data are not normally distributed, so the value used is the median value.

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RESULTS

Table 1.
Adolescent sexual behavior before and after the implementation of the Health Belief Model (HBM) at SMK Pasundan 2 Cimahi

Variable	Median	SD	Min-Max	95% CI
Sexual behavior before the implementation of HBM	1.00	0.335	0-1	0.77 –0.99
Sexual behavior after the implementation of HBM	0.00	0.362	0-1	0.03 –0.27

Table 2.
Differences in adolescent sexual behavior before and after the implementation of the Health Belive Model (HBM) at SMK Pasundan 2 Cimahi

Variable	N	Mean Rank	p-Value
Sexual behavior before the implementation of HBM	40	15.00	0.000
Sexual behavior after the implementation of HBM	40	0.00	

Based on the results of the analysis in table 1, it was found that from 40 respondents, before HBM was carried out, most of the adolescents engaged in sexual behavior with an average value of 1 (doing unhealthy sexual behavior), 95% of adolescent sexual behavior was between 0.77 and 0.99. Based on the researcher's interviews with several respondents who had random sexual behavior, it was found that the respondents' reasons were to satisfy their desires and to experiment, this was because adolescents were in puberty and experienced many changes in themselves. According to (2), one of the prominent characteristics of physical changes in adolescents is the active operation of the sex glands so that they become a sexual urge. This sexual drive is closely related to sexual behavior. Adolescents in general experience a surge in libido due to physical changes at puberty, so that if they are not equipped with sexual knowledge and are fortified with morals, adolescents with high libido tend to engage in sexual activity, which can lead to irresponsible sexual behavior (2).

Hormonal changes can increase sexual desire in adolescents. Sexual violations can occur from various sides, one of which is from media information and relationships (1). Therefore, the role of parents is very important in supervising children both in their relationships and in access to the media they use so that their children's future can be directed towards positive things (1).

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HBM picture after the implementation of a decline in teen sexual behavior. Most of the adolescents did not engage in unhealthy sexual behavior with a mean value of 0. After the application of HBM 95% of adolescent sexual behavior was between 0.03 and 0.27. This study discusses the prevention of adolescent sexual behavior internally by controlling oneself not to have penetrative sex. According to (12) internally, a factor that plays an important role for adolescents in preventing sexual behavior is the factor of self-control. Self-control efforts in adolescents are being able to have the ability to control their behavior, so they don't just follow the wishes of others that are contrary to the rules that apply in society (9).

According to (12) internal self-prevention efforts in adolescents can be done by trying to increase faith and devotion to God Almighty; strive to know oneself and instill self-confidence by identifying interests, talents, potentials and channeling them into positive leisure activities; identify with a positive and productive social environment; filter various sources of incoming information and learn disciplines. While external prevention that people around adolescents can do, especially parents is to carry out good supervision and care for adolescents, provide a school environment with good education, and place adolescents in an environment that can create opportunities for youth to be creative (12).

HBM behavior in adolescents can be a form of prevention of health problems that adolescents generally experience. According to Kennedy (2009). HBM is a combination of knowledge, opinions, and actions individuals or groups refer to their health. According to (13), HBM is used to explain broadly how the failure of community participation in the prevention and early detection of disease is often considered the main framework for behavior related to human health. HBM can also be said to be a conceptual formulation to determine individual perceptions whether they accept or not about their health so that to find out about individual perceptions, it can be assessed from variables which include the individual's desire to avoid pain, their belief that there is an effort to avoid the disease (13).

In this study, the HBM model used is based on components including (1) Perceived susceptibility, namely determining the population at risk and the level of risk. Measuring risk based on a person's nature or behavior, the height is felt vulnerable if it is low, (2) Perceived seriousness/severity, namely Determining and explaining the consequences of the risk and its condition, (3) Perceived benefits, namely determining actions to clarify the expected positive effects and explaining evidence of effectiveness, (4) Perceived barriers, namely identifying and reducing obstacles through certainty, adolescents understand the perceived barriers to self-control, (5) Cues to action, namely providing information on how? by promoting awareness, (6) Self efficacy, namely providing training, guidance and positive reinforcement (Tarkang & Zotor, 2015).

According to (14), HBM is influenced by perceived threats (if the perceived threat increases, preventive behavior will also increase), advantages and disadvantages (considerations between the advantages and disadvantages of behavior to decide to take preventive action or not), behavioral instructions in the form of various information from outside or advice on health issues (e.g. mass media, campaigns, advice

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from others, illnesses from other family members or friends), socio-demographic factors (education, age, gender, ethnicity) and self-assessment (perceptions of one's ability to take preventive action).

Based on the analysis in Table 2 can be seen that out of 40 respondents before their application has HBM unhealthy sexual behavior (median value 1) and after applying HBM Most teens applying healthy behaviors (median value 0). The statistical test results obtained p-value = 0.002 (<0.05), then the hypothesis test is Ho is rejected, so it can be concluded that there are differences in the application of HBM to sexual behavior towards adolescents at SMK Pasundan 2 Cimahi.

The results showed that after the application of HBM, they tended not to engage in sexual behavior because of their perception of the risk or impact due to sexual behavior that sexual behavior could harm themselves, their partners, their families until their future could then control themselves to do these sexual behaviors. Many adolescents after implementing HBM do positive activities both at school and outside of school. Meanwhile, adolescents who do not apply BHM tend to engage in sexual behavior due to their lack of knowledge and lack of self-control due to sexual urges during puberty.

Adolescent perceptions of sexual behavior in terms of health can be obtained from knowledge of the impact of sexual behavior. Adolescent perceptions of sexual behavior associated with HBM components, namely the perception of disease infection, the perception of the seriousness of the disease, positive perceptions of preventive behavior, negative perceptions of preventive behavior, perceptions of expectations, and perceptions of one's own ability to perform preventive behavior are quite high.

The results of this study are not in line with the results of research by (3) which show that adolescents are prone to sexual behavior because of their great curiosity and want to try new experiences in adolescence, but do not realize and think that sexual behavior currently carried out has no impact. anything about them (perceived susceptibility) and considers sexual behavior that is not excessive and does not have any risk (perceived severity). The results of this study are not in line with the results of this study because the research was conducted using a descriptive method and the sample was only 5 street children who engaged in sexual behavior, while those who did not engage in sexual behavior were not examined for their HBM behavior. The difference can also be seen in terms of respondents, where in this study the respondents were high school students who were in an educational environment so that they received supervision from the school.

The results of this study also obtained adolescents who have high HBM but have sexual behavior, this is due to the lack of sex education from parents and schools so that adolescents get wrong information from irresponsible environments such as from the internet, and some teenagers follow their friends. and feel proud of successful sexual behavior. Whereas adolescents whose HBM is low but do not engage in sexual behavior because their parents' parenting style is good, adolescents who usually communicate with their parents will get advice or advice from their parents that their current behavior can affect their future so that teenagers can avoid engaging in sexual behavior.

The results of the study are in line with the research of (15) The results showed differences in the control group and peer counselor intervention based on Keris-net.

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The results of the analysis using the Wilcoxon signed-rank test in the experimental group showed a p-value of 0.000, which means that Keris-net-based peer counselors have a significant effect on decreasing adolescent sexual behavior. This shows that the counselor's intervention as well as the implementation of HBM through previous education can change the behavior of adolescents related to sexual behavior. this is because of the level of knowledge and understanding of adolescents which changes adolescent behavior for the better.

Other supporting research also states that personal field guidance information services can be used to help students improve their understanding of the impact of free sex behavior (16). The application of HBM is a form of guidance for adolescents in increasing knowledge, providing information to increase understanding of healthy sexual behavior. The results of this study are in line with (17) statement that sexual education is one type of topic in providing relevant information services, namely information about the process of young human development and understanding of self and fellow humans including data or facts about developmental stages and the environment. physical and psychological life, together with the reciprocal relationship between personality development and association in various societies.

Based on table 1, it was found that sexual behavior before the implementation of HBM was 1.00 (95% CI: 0.77 –0.99) with a standard deviation of 0.335. Sexual behavior after applying HBM was 0.00 (95% CI: 0.03 –0.27) with a standard deviation of 0.362. Based on interval estimation, it is concluded that 95% of adolescent sexual behavior is between 0.77 and 0.99 and after the application of PHM 95% of adolescent sexual behavior is between 0.03 and 0.27.

CONCLUSION

Based on the results of the study, data analysis, and discussion of the application of the HBM relationship with adolescent sexual behavior in SMK Pasundan 2 Cimahi, it can be concluded that the majority of respondents do unhealthy sexual behavior (median 1); Most of the respondents engaged in unhealthy sexual behavior (mean value 0); There is a relationship between the application of HBM and adolescent sexual behavior at SMK Pasundan 1 Cimahi with p-value = 0.002.

Implications for practice

For adolescents, it is hoped that they can increase the knowledge and awareness of adolescents to apply HBM in their lives and play an active role in positive activities to avoid irresponsible adolescent sexual behavior and avoid the negative impact of sexual behavior. Nursing Science is expected to provide additional scientific information about HBM on adolescent sexual behavior and can be used as a development of nursing science, especially in the field of community nursing by increasing public knowledge through health education about HBM and the impact of adolescent sexual behavior. For Further Research is expected to conduct more in-depth research related to other factors associated with adolescent sexual behavior and the application of HBM in adolescents in homes, schools, and communities

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