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Knowledge, Attitudes, and Behaviors of Adolescents Regarding Induced Abortion (Abortus Provokatus) at MAS Darul Ulum Islamic Boarding School, Banda Aceh: A Descriptive Cross-Sectional Study

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ABSTRAK

Background : Induced abortion (abortus provokatus) is a persistent social and public health problem among Indonesian adolescents. Unwanted pregnancies, particularly those arising from premarital sexual activity, frequently culminate in unsafe abortion practices among youth. Adolescents in Islamic boarding schools (pesantren) represent a distinct population whose reproductive health knowledge, attitudes, and behaviors have been underexplored. This study aimed to describe the knowledge, attitudes, and behaviors (KAB) of adolescent students regarding induced abortion at MAS Darul Ulum Jambo Tapee, Banda Aceh.

Methods : A descriptive cross-sectional study was conducted among students of Classes X and XI at MAS Darul Ulum Jambo Tapee, Banda Aceh (academic year 2015–2016). Simple random sampling was applied using the Slovin formula ($d = 0.05$), yielding a sample of 143 from a population of 224 students. Data were collected via a structured self-administered questionnaire covering three domains: knowledge of abortion (6 items, true/false), attitudes toward abortion (6 items), and abortion-related behaviors (6 items, yes/no). Responses were categorized as Good (75–100%), Moderate (40–74%), or Poor (<40%). Univariate analysis was performed to generate frequency distributions and percentages.

Results : Of 143 respondents, 112 (78%) were female and 31 (22%) were male. In the knowledge domain, 103 students (72%) had good knowledge, predominantly female (77%). In the attitude domain, 102 students (71.3%) demonstrated protective attitudes, of whom 76% were female. However, only 18 students (12.6%) exhibited concordantly protective behaviors, of whom 72% were female. A marked discordance was observed: while 72% demonstrated good knowledge and 71.3% held protective attitudes, only 12.6% translated these into protective behavioral patterns.

Conclusions :Adolescents at MAS Darul Ulum showed relatively adequate knowledge and positive attitudes regarding induced abortion, yet the conversion to protective behavior was critically low. This knowledge–behavior gap indicates that information-based approaches alone are insufficient. School-based reproductive health education, parental engagement, and collaboration with electronic media are recommended to reinforce protective knowledge into sustained behavioral change among adolescents.

Keywords: Abortus provokatus · Induced abortion · Adolescent knowledge · Attitudes · Behavior · Pesantren · Indonesia · Banda Aceh · Reproductive health

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PENDAHULUAN

The term abortus (abortion) derives from the Latin aboriri, meaning miscarriage. Medically, abortus refers to the termination of pregnancy before the fetus is capable of surviving independently outside the uterus—generally before 28 weeks of gestation or when fetal weight is below 400–1000 grams. In common usage, particularly in Indonesia, the term specifically implies deliberate termination of pregnancy, and is often associated with social stigma and moral discourse.

Abortus provokatus (induced abortion) is classified into two major subtypes: Abortus Provokatus Therapeuticus, performed on medical grounds to preserve the mother's life with formal medical authorization; and Abortus Provokatus Criminalis, performed illegally and covertly, frequently by untrained practitioners, and representing a leading cause of maternal mortality in developing countries.

Globally, the World Health Organization (WHO) estimates that approximately 20 million unsafe abortions occur annually in developing countries, resulting in the deaths of over 70,000 women each year. Unsafe abortion accounts for 10–50% of maternal mortality in these settings. Indonesia itself has no comprehensive national registry for abortion incidence, but data from the Pusat Krisis Terpadu (Integrated Crisis Center) at RSCM recorded rape-related cases ranging from 118 to 287 annually between 2000 and 2005, many of which involved resulting unwanted pregnancies. In Aceh Province, a 1990 survey documented abortion rates of 1 per 225 deliveries among women aged 17–19 years.

Adolescents are especially vulnerable to unintended pregnancy and unsafe abortion. Sexual behavior among adolescents in Indonesia is increasingly influenced by free association (pergaulan bebas), pornographic media exposure, and limited reproductive health education. According to Kusmiran (2011), the majority of adolescent pregnancies in Indonesia are unwanted and result from inadequate reproductive health knowledge, weak self-identity, lack of parental supervision, and rapid growth of digital media.

The Knowledge–Attitude–Behavior (KAB) framework posits that behavioral change is influenced sequentially by awareness, attitudinal disposition, and finally behavioral enactment. However, research consistently shows that possessing knowledge does not automatically translate into corresponding behavior—a phenomenon known as the 'know-do gap.' This gap is particularly prominent in adolescent reproductive health, where social norms, stigma, and lack of safe discussion spaces inhibit protective action.

MAS Darul Ulum Jambo Tapee is an Islamic boarding school (pesantren) located in Banda Aceh, accommodating students from classes X through XII. As a residential religious institution, it represents a context in which adolescent reproductive health has been largely unstudied. This study was therefore conducted to describe the knowledge, attitudes, and behaviors of Class X and XI students at this institution regarding induced abortion, and to identify where the KAB chain breaks down.

METHODS

Study Design

This study employed a descriptive cross-sectional design using quantitative methods. The aim was to describe the distribution of knowledge, attitudes, and behaviors related to induced abortion among the target population at a single point in time.

Study Setting

Data were collected at MAS Darul Ulum, Jalan Syiah Kuala No. 5, Banda Aceh, Aceh Province, Indonesia. The school comprises 11 classes (4 classes in Grade X, 4 in Grade XI, 3 in Grade XII) and is led by Dra. Kesuma Nirwana as Head of Madrasah. Facilities include classrooms, a library, a laboratory, a sports area, and a school health unit (UKS). The study period spanned November 2015 to June 2016.

Population and Sample

The study population comprised all students in Classes X and XI at MAS Darul Ulum (N = 224; Class X: n = 109, Class XI: n = 115). Class XII was not included. Sample size was determined using the Slovin formula:

$$n = N / (1 + N \cdot d^2) = 224 / (1 + 224 \times 0.05^2) = 224 / 1.56 = 143 \text{ students}$$

where N = total population and d = 0.05 (desired precision level). Simple random sampling (probability sampling) was used to select the 143 participants. Inclusion criteria were: (1) enrolled in Class X or XI; (2) present during data collection; (3) willing to participate. Students absent on the day of data collection were excluded.

Research Variables

Independent variables: Knowledge, attitudes, and behaviors of students regarding induced abortion.
Dependent variable: Negative impacts of induced abortion (abortus provokatus).

Measurement Instrument

A structured self-administered questionnaire was used, comprising three sections corresponding to the three KAB domains:

(1) Knowledge – 6 true/false items covering: definition of abortion, sexual behavior as a cause, psychological effects, social stigma, role of education/experience, and economic motivation.

(2) Attitudes – 6 true/false items covering: health risks to reproductive organs, responsibility of female adolescents, peer education, risks of pornography exposure, healthy courtship, and avoidance of experimentation.

(3) Behaviors – 6 yes/no items covering: family discussion of reproductive health, reflective thinking about consequences, perception of abortion as normal, pre-consideration of moral risks, and hypothetical abortion intention.

Responses were scored and categorized according to standard Indonesian health research criteria [9]: Good (75–100%), Moderate (40–74%), and Poor (<40%). Questionnaires were distributed directly in classrooms by the researcher, with verbal instructions provided to ensure comprehension.

Data Analysis

Univariate analysis was performed to generate frequency distributions (n) and percentages (%) for each domain, stratified by sex. The percentage formula used was: $P = (f/n) \times 100\%$, where P = percentage, f = frequency of a category, and n = total sample. Data were processed and tabulated manually and presented in frequency distribution tables.

Ethical Consideration

All participants received an information sheet explaining the study objectives and voluntary nature of participation. Written informed consent was obtained from each respondent prior to questionnaire distribution. Participant identity was not linked to individual responses; data are reported only in aggregate.

RESULT

4.1 Geographic and Demographic Setting

MAS Darul Ulum is situated on Jalan Syiah Kuala No. 5, Kota Banda Aceh. Total school enrollment is 314 students: 148 male and 166 female. For this study, 143 students from Classes X and XI were selected. Table 1 presents the distribution by class and Table 2 presents distribution by sex.

Table 1. *Distribution of Students by Class at MAS Darul Ulum Banda Aceh (Population N = 224)*

No.	Class	Population (N)	Percentage (%)
1	Class X	109	48.7
2	Class XI	115	51.3
	Total	224	100.0

Table 2. *Distribution of Study Respondents by Sex (Sample n = 143)*

Sex	Frequency (n)	Percentage (%)
Male	31	21.7
Female	112	78.3
Total	143	100.0

Based on Table 2, the majority of respondents were female (n = 112; 78.3%), reflecting the actual enrollment distribution of the school in the relevant grade levels

4.2 Knowledge of Induced Abortion

Table 3 presents the frequency distribution of knowledge scores by sex. Of 143 respondents, 103 (72.0%) demonstrated good knowledge of induced abortion. The remaining respondents were categorized as having moderate or poor knowledge. Female students were the predominant group in the good-knowledge category (77%), while males comprised 23%. The knowledge questionnaire covered definitions, causes, health risks, and social dimensions of induced abortion.

Table 3. *Distribution of Knowledge Scores on Induced Abortion by Sex*

Sex	Frequency (n)	Percentage (%)
Male (good knowledge)	24	23.3
Female (good knowledge)	79	76.7
Total (good knowledge)	103	72.0 of sample

Note: Respondents are those categorized as 'Good' (score ≥75%). Categories 'Moderate' and 'Poor' accounted for the remaining 28.0%.

The majority of students at all levels had heard of the term 'aborsi' (abortion) in general, but comprehension was incomplete for specific subtypes (provoked vs. spontaneous) and the legal classification of criminal abortion. This aligns with Notoatmodjo's (2012) observation that knowledge in health domains often remains at the 'tahu' (recall) level without reaching the deeper stages of understanding, application, or analysis [9].

4.3 Attitudes Toward Induced Abortion

Table 4 shows attitude scores by sex. Of 143 respondents, 102 (71.3%) demonstrated protective attitudes toward induced abortion. Female students again represented the majority (76%), with males at 24%. Most respondents agreed that: induced abortion poses serious risks to female reproductive health; female adolescents have a responsibility to protect their reproductive organs; peer education on reproductive health is important; and free sexual behavior driven by pornographic media is harmful.

Table 4. *Distribution of Attitudes Toward Induced Abortion by Sex*

Sex	Frequency (n)	Percentage (%)
Male (protective attitude)	24	23.5
Female (protective attitude)	78	76.5
Total (protective attitude)	102	71.3 of sample

Note: 'Protective attitude' = score ≥75% on the attitude subscale.

The high proportion of protective attitudes—particularly among female respondents—may reflect the influence of the pesantren's Islamic educational values, which emphasize chastity, moral responsibility, and avoidance of zina (illicit sexual relations). However, a minority of respondents expressed attitudes that were equivocal or non-protective, suggesting that moral messaging alone is insufficient.

4.4 Behaviors Related to Induced Abortion

Table 5 presents behavioral findings. Only 18 respondents (12.6%) demonstrated a pattern of consistently protective behaviors across the six behavioral items. Of these, 72% were female (n = 13) and 28% were male (n = 5). The low behavioral score is primarily attributable to: limited family discussion about reproductive health; lack of reflective thinking about future consequences; and a non-trivial proportion of respondents indicating they might consider abortion as a solution if faced with an unintended pregnancy.

Table 5. *Distribution of Behavioral Responses Related to Induced Abortion by Sex*

Sex	Frequency (n)	Percentage (%)
Male (protective behavior)	5	27.8
Female (protective behavior)	13	72.2
Total (protective behavior)	18	12.6 of sample

Note: 'Protective behavior' = score ≥75% on the behavioral subscale (correct response to ≥5 of 6 items).

The behavioral domain revealed that most respondents had not engaged in family discussions about sexual or reproductive health, did not habitually reflect on the consequences of unsafe sexual behavior, and had limited exposure to accurate, practical information about contraception and the mechanics of pregnancy.

4.5 Summary: KAB Discordance

Table 6. *Summary of Knowledge, Attitude, and Behavior Scores (N = 143)*

Domain	Category	n	%
Knowledge	Good (≥75%)	103	72.0
Attitudes	Protective (≥75%)	102	71.3
Behaviors	Protective (≥75%)	18	12.6

Table 6 illustrates the pattern of KAB discordance: while 72.0% of respondents had good knowledge and 71.3% held protective attitudes, only 12.6% demonstrated protective behaviors. This gap of approximately 59 percentage points between attitude and behavior is the central finding of this study.

DISCUSSION

5.1 Characteristics of Respondents

The study enrolled 143 adolescents (ages approximately 15–17 years), of whom 78% were female, reflecting the actual enrollment pattern of the school. Chronologically, adolescents are individuals aged approximately 11–21 years, characterized by rapid physical, psychological, and social change, including maturation of the reproductive system [10]. This developmental stage, combined with exposure to social media and weakening of parental supervision, creates conditions of heightened vulnerability to reproductive health risks [8]. The boarding school setting provides a degree of institutional supervision, yet cannot fully insulate students from external influences.

5.2 Knowledge

Most students (72%) demonstrated good knowledge of induced abortion. The predominance of female students in this category (77%) is consistent with national and international literature showing that female adolescents generally exhibit greater awareness of reproductive health risks due to personal salience and greater peer discussion [11]. However, it must be noted that knowledge at the 'tahu' (recall) level—which is the level typically measured by true/false questionnaires—does not

guarantee understanding, application, or critical analysis, as Notoatmodjo's (2012) taxonomy of knowledge makes clear [9].

The finding that 23% of male respondents and a proportion of female respondents lacked good knowledge points to the insufficiency of reproductive health content in the school curriculum. As Kusmiran (2011) documents, many Indonesian adolescents remain unaware that certain sexual behaviors (including petting without penetration) can result in pregnancy, or that contraceptive failure is a real possibility [8]. Targeted, age-appropriate sexual and reproductive health education—incorporating more than just biological facts—is therefore essential.

5.3 Attitudes

The majority of respondents (71.3%) held protective attitudes regarding induced abortion. This high attitudinal alignment likely reflects the Islamic values embedded in the pesantren curriculum, which strongly discourage premarital sexual activity and emphasize reproductive responsibility. Notoatmodjo (2012) defines attitude as a readiness to act, not the action itself; it represents an internal disposition shaped by received information, emotion, and social norms [9].

A subset of respondents did not express fully protective attitudes, potentially because they lacked accurate information about the full spectrum of reproductive health risks, consistent with Notoatmodjo's fourth level of attitude: 'responsible' behavior, which requires not only awareness but genuine commitment to a position despite social resistance. Where students stated 'disagree' to protective statements, this may reflect unexpressed personal experiences or unresolved normative ambiguity rather than endorsement of abortion.

5.4 Behaviors

The most striking finding is the very low proportion of protective behavioral responses (12.6%). This is consistent with Lawrence Green's PRECEDE model as cited by Notoatmodjo (2010), which distinguishes predisposing factors (knowledge, attitudes, values) from enabling factors (skills, access, services) and reinforcing factors (peer and family support) [12]. Even when knowledge and attitudes are positive, behaviors will not follow unless enabling and reinforcing conditions are present.

In this study, key behavioral deficits included: failure to discuss reproductive health with family members; absence of reflective thinking about the consequences of unsafe sexual behavior before acting; and a proportion of respondents indicating willingness to consider abortion if confronted with an unintended pregnancy. According to Pickett and George (2008) as cited in Yulistina, health education should not merely impart knowledge but actively cultivate decision-making skills and self-efficacy, so that the knowledge-to-behavior pathway is completed [11].

The low behavioral score is also partly attributable to limited exposure to comprehensive reproductive health education within the school itself. Students reported receiving only general biological information in class, without specific guidance on sexual decision-making, communication with partners, or seeking health services. This gap between available information and actionable guidance is characteristic of reproductive health programs that prioritize abstinence messaging without equipping students with practical protective skills.

5.5 Implications

The findings underscore three practical recommendations: (1) electronic and broadcast media—particularly television, which remains a trusted information channel in Aceh—should actively disseminate accurate, culturally appropriate reproductive health information targeting adolescents; (2) parents—especially mothers—should be engaged and equipped to discuss reproductive health openly with their children, reducing reliance on peer or media sources of potentially inaccurate information; (3) educational institutions should integrate structured, comprehensive reproductive health seminars into the school calendar, particularly at the boarding school level where opportunities for family discussion are limited.

5.6 Study Limitations

Several limitations of this study should be acknowledged. First, the descriptive design and univariate analysis preclude identification of causal or associative relationships between the KAB domains. Second, the study was conducted at a single school, limiting generalizability to other pesantren settings or to non-boarding schools. Third, behavioral data are based on self-report and may be subject to social desirability bias, particularly given the sensitive nature of the topic in a

religious setting. Fourth, the Slovin formula used for sample size calculation does not account for design effect or expected prevalence, and should ideally be complemented by power-based calculations in future research. Fifth, the study was conducted at the undergraduate thesis level, and instrument validation (reliability and construct validity testing) was not performed.

CONCLUSION

This descriptive cross-sectional study among adolescents at MAS Darul Ulum Islamic Boarding School, Banda Aceh, found that the majority of students demonstrated good knowledge (72.0%) and protective attitudes (71.3%) regarding induced abortion. However, only 12.6% exhibited consistently protective behaviors. This substantial knowledge–behavior gap indicates that information and attitudinal alignment alone are insufficient to generate protective reproductive health behavior among adolescents in this context.

It is recommended that: (1) health institutions collaborate with electronic media to broadcast age-appropriate reproductive health education; (2) parents—particularly mothers—be engaged as primary reproductive health educators within the family unit; and (3) schools establish formal, recurring reproductive health seminars to bridge the gap between knowledge and practice. Future research should employ validated instruments, multi-site samples, and analytical designs that can identify determinants of the KAB discordance observed in this study.

DECLARATIONS

Ethics and Consent

This study was conducted in accordance with the ethical principles of biomedical research. All participants provided informed consent prior to participation. Data are reported only in aggregate; no individual participant can be identified from the published results. Ethical approval was granted by the Faculty of Medicine, Universitas Abulyatama.

Competing Interests

The authors declare no competing interests.

Authors' Contributions

R designed and conducted the study, collected and analyzed data, and wrote the manuscript.

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