



Integrating Science Education, Transcendental Ethics, and Legal Literacy in Reproductive Health as a Preventive Effort Against the Circulation of Illegal Abortion Drugs: Evidence Mapping

Noor Rahmad¹, Absori¹, Rizka¹

¹ Muhammadiyah University of Surakarta, Surakarta, Indonesia.

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Corresponding Author:

Noor Rahmad

noorrahmad@unimugo.ac.id

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Abstract: Abortion represents a public health challenge at the intersection of clinical safety, ethics, and law; limitations on access to safe abortion services are likely to incite a channel push to informal/illegal abortion, specifically via digital modalities. The legal framework in Indonesia is primarily restrictive with limited exceptions, which means that uncertainty around legal boundaries, stigma and barriers to accessing care can generate demand for information and illegal abortions. This study combines an evidence mapping integrated review using the PICo/PEO framework to synthesize the cross-disciplinary evidence across three pillars, including sexual-reproductive health (SRH) science, transcendental ethics, and legal literacy (criminal-health-pharmaceutical-digital regulation). The search was performed through health, education and legal databases and a two-stage selection process as per the PRISMA principles and extraction was performed from a thematic-operational matrix. The review invariably found that the strongest prevention hinges on the development and implementation of a three-pillar curriculum, along with case/vignette-based pedagogy, medico-legal risk literacy, and online information sorting competency. Evidence mapping the strengthening of legal literacy and design due diligence platform as a strategic node to reduce demand and suppress the circulation of illegal abortion drugs.

Keywords: Digital ecosystem; Illegal drugs; Literacy law; Reproductive health; Transcendental ethics

Introduction

Abortion is a health, ethical, and legal issue that remains controversial due to its relationship to clinical safety, women's rights and vulnerabilities, religious-sociocultural norms, and state policies that regulate its practice and access (Shafy, 2024; Triandani et al., 2024; Wongkar & Ekaputra, 2025). Globally, abortions occur in large numbers every year, so the discourse on abortion cannot be separated from the dimensions of public health and the governance of the health care system (Recker et al., 2025). However, when access to safe services is unavailable or restricted, the abortion issue shifts from a merely normative debate to a problem of

health risks and governance, including the potential for shifting to informal/illegal channels that are difficult to monitor (Kagaha, 2023; Klimiuk et al., 2024).

Abortion control regulations in Indonesia are restrictive, they result out of moral, religious and state rights system- related negotiations (Triandani et al., 2024; Wongkar & Ekaputra, 2025). The available empirical evidence supports that in Indonesia the legal system in place prohibits abortion in principle unless very strict regulations, in such instances as a medical emergency and pregnancy during rape, which are governed under the laws of health law and criminal law regimes (Triandani et al., 2024; Wongkar & Ekaputra, 2025) This tension of general prohibitions and limited exceptions calls for an accurate public understanding in

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law to provide a clear representation of the limitations, conditions, and impact within which abortion is "limitedly accommodated" but subjected to stringent controls (Wongkar & Ekaputra, 2025). Additionally, at the same time, Indonesian discussions cannot lose sight of debates within society, that are in keeping with Islam and moral discourse, shaping social acceptance and policy orientation (Hamdani & Ishaq, 2024).

Cross-contextual evidence suggests that criminalization/restriction of abortion services does not stop the practice, but encourages a shift to informal channels with minimal oversight, including the circulation of unregistered abortifacients and the lack of formal training for pharmacy workers, thus weakening the quality of services and the regulatory capacity of health authorities (Otsin et al., 2023; Simmelink et al., 2022). In such situations, service seekers tend to rely on social networks and community informants to access drugs/information, which increases the need for clear and actionable legal information (fair notice) for both users and providers (Katz et al., 2022). This reliance on social networks and community informants in response to restrictions on formal services is further reinforced by the accessibility of digital platforms, which open up new distribution channels with more complex regulatory challenges. In the digital space, purchasing drugs through online platforms/social media is correlated with low verification of drug legitimacy and increases the risk of unsupervised use (Sarhan et al., 2025), so that preventive interventions need to target "demand" through increasing legal medical risk literacy and health worker-based education (Alqarni et al., 2023). The accompaniment-based support model also emphasizes that users' needs are simultaneously medical, emotional, and legal, so preventive strategies should incorporate risk communication, safe referrals, and psychosocial support, not just action (Velarde et al., 2023; Veldhuis et al., 2022).

This review aims to map empirical and normative evidence on three pillars: reproductive health science education, transcendental ethics, and legal literacy relevant to preventing the circulation of illegal abortion drugs, particularly in the digital ecosystem and the context of criminalization. It also identifies the preventive causal mechanisms of curriculum integration in reducing demand for/access to illegal channels, and formulates a framework for integrated cross-disciplinary learning for adolescents, students, and health workers. The novelty lies in the formulation of evidence map which combines SRH science, transcendental ethics, and legal literacy as an integrated preventive model against the circulation of illegal abortion drugs, not just a separate analysis of abortion access or criminalization, and places prevention at the

node of "request for legal risk information" in the digital space.

Method

Design and Methodological Justification

This research was designed as integrative review combined with an approach evidence mapping to produce a cross-disciplinary conceptual synthesis and at the same time a systematic mapping of the available evidence landscape. Methodologically, integrative review was chosen because it allows for the integration and interpretation of findings from diverse scientific traditions of reproductive health science, transcendental ethics, and legal literacy, which are inherently heterogeneous in study design, terminology, and normative framework. Evidence mapping used to compile a thematic-operational matrix so that it can identify evidence clusters, research gaps, and learning integration priorities as preventive interventions.

Evidence Selection Framework

The evidence selection framework for this review uses PICO/PEO, commonly used in policy, ethics, and education reviews, to ensure traceability, relevance, and transferability of findings. The Population (P) includes adolescents, students, health workers, and the general public as users of reproductive health information. Interest/Exposure (I/E) includes sexual and reproductive health (SRH) education, legal literacy related to sexual and reproductive health rights (SRHR) and abortion, encompassing criminal, health, pharmaceutical, and digital regulatory aspects, as well as ethical dimensions, including professional ethics, conscientious objection, and transcendental ethics, particularly in the context of legal restrictions/criminalization. Context (Co) prioritizes Indonesia, but also includes relevant international evidence for comparison, particularly studies linking legal changes to service access, professional practices, information-seeking behavior, and health outcomes.

Literature Search Strategy

The literature search was systematically designed by combining multidisciplinary databases to capture the intersection of health, education, ethics, and law. For the health and health education domains, PubMed/MEDLINE, Scopus, Web of Science, CINAHL, and ERIC were used. For the legal and policy aspects, HeinOnline and ProQuest (Law/Policy) were used, supplemented by LexisNexis (where available) and Google Scholar to reach national legal articles and limited grey literature. For the Indonesian context, the search was extended to national repositories (Garuda, SINTA, and Neliti where relevant) to increase sensitivity

to local publications. Keywords were organized based on three pillars (A) SRH/education, (B) abortion/drugs, (C) law/legal literacy, and one supporting context (D) digital ecosystem, then adjusted per database. Examples of combined strings in Scopus/Web of Science integrate the terms SRH and education, abortifacient (misoprostol/mifepristone), legal-criminal concepts (criminal*, legislation, legal literacy), and digital channels (online, social media, platform). The language range is limited to English-language publications for consistency of synthesis.

Inclusion and Exclusion Criteria

Inclusion criteria for this review included studies that addressed at least one of three main pillars: SRH education (including curriculum and life skills), ethics (e.g., clinical/professional ethics, conscientious objection, and religious/transcendental ethics), or legal literacy related to SRHR/abortion (including criminal, health, pharmaceutical, and digital regulatory aspects); demonstrated an explicit link to the issues of abortion, access to services, abortifacient drugs, or the impact of legal restrictions, including the behavioral consequences of seeking services through informal/online channels; used academically sound designs such as surveys, policy studies, normative legal studies, ethical analyses, narrative reviews, mixed methods, or evidence-based curriculum reports; and provided full text. Exclusion criteria included popular opinion articles without a traceable methodology or academic argument; studies that solely addressed the clinical aspects of abortion without an educational/ethical/legal dimension, unless they presented risk data relevant to the SRH module; and duplication of publications (e.g. preprints and published versions), with priority given to the most final version.

Data Extraction and Evidence Map Construction

Data extraction is done through data charting form structured description aligned with the matrix columns (Table 1), including: study identity (author, year, context), dominant pillar (Science/SRH, Ethics, Law, or a combination), aims-scope, methods/design, population/setting, key findings, key legal/ethical concepts, educational/prevention implications, and stated limitations. This approach ensures traceability between study characteristics and synthesis conclusions.

Next, thematic coding was conducted to integrate the three pillars. Evidence was grouped into themes of Science/SRH (e.g., clinical risks of illegal drugs, adverse drug reactions prevention, service referrals), Transcendental Ethics (conscience formation, professional virtue, moral conflict), and Legal Literacy (legal limits of abortion, criminal consequences,

regulation of hard drugs/digital drugs).fair notice). The connecting theme maps preventive mechanisms through the knowledge-attitude-norm-information/drug seeking behavior-service access decisions pathway.

The output is presented as evidence map. The table is an expanded matrix with columns for “preventive mechanisms” and “suggested curriculum components,” so that the recommendations are operational. Optionally, a visual map (bubble plot/heat map) is created based on a combination of pillar × method type × target group to identify evidence concentrations and research gaps.

Synthesis Technique: Integration of Narrative and Preventive Conceptual Models

A structured narrative synthesis was conducted in three sequential layers: a descriptive layer maps the distribution of studies according to the study pillars, country context, population characteristics, methodological approaches, and digital issues (e.g., platforms, anonymity, and marketing patterns); an analytical layer links findings on criminalization/restrictions with behavioral shifts toward informal channels, while identifying drivers of demand for illegal drugs: legal uncertainty, barriers to access to services, and stigma as determinants that strengthen online information/product searches; and an operational layer formulates learning integration components (content, methods, outcomes) that can be translated into the curriculum. Based on this synthesis, a preventive logic model was developed: inputs in the form of evidence-based SRH modules, legal literacy (criminal-pharmaceutical-digital), and transcendental ethics; processed through case-based learning/vignettes, counseling simulations, digital literacy, value discussions, and school-health office collaboration; producing outputs in the form of increased knowledge of clinical risks, clarity of legal boundaries, the ability to sort online information, and strengthened self-control; which is expected to reduce the intention to seek illegal drugs, increase safe referrals, and in the long term suppress the circulation of illegal abortifacients by reducing demand and increasing population literacy.

Result and Discussion

The evidence matrix consistently demonstrates that preventing the distribution of illegal abortion drugs requires the integration of the three pillars of law, SRH science, and ethics, with a strong emphasis on legal literacy and case-based pedagogy. In the Indonesian context, studies of criminal law and the digital

ecosystem highlight the need for criminal policy reform, platform oversight, and public education regarding the criminal risks of distributing/using prescription drugs for criminal abortion, including the role of social factors such as unwanted pregnancy. From an educational perspective, narrative reviews of medical curricula and studies of academic attitudes emphasize the urgency of including topics on abortion, contraception, the “beginning of life,” conscientious objection, and interdisciplinary sessions on legal ethics through vignettes to clarify the boundaries of counseling and referrals. Survey evidence reinforces that increasing

SRHR legal knowledge and life skills through collaboration between schools and health services can reduce risky behaviors and divert choices away from informal/illegal channels. Post-legal restrictions (e.g., Covid-19, Dobbs) ethical-policy analysis adds the “grey zone” dimension of service access and clinician moral distress, as well as the impact of abortifacient drug regulations on access to other drugs, so learning needs to integrate aspects of pharmaceutical regulation, socio-cultural/religious values, and cross-country comparisons of legal regimes.

Table 1. Review Matrix (Evidence Map)

Pillar Focus (Science/Ethics/Law)	Purpose/Scope	Method/Design	Key Findings (summarized)	Implications for Integrating Learning & Preventing Illegal Abortion Drug Distribution
(Criminal) law, digital ecosystem (Herdian & Andriasari, 2025a)	Examining criminal policies on the distribution of illegal abortion drugs on digital platforms and their impact on cases of criminal provocatus abortion in Indonesia.	Legal-policy study articles (in legal studies)	Emphasizes the need for improved criminal policy, oversight, and education to reduce illegal abortions in Indonesia, particularly related to digital circulation.	It serves as the foundation for digital legal literacy modules (understanding criminal risks/regulations) and education-based prevention to suppress the demand and distribution of illegal abortion drugs in the digital space.
Science (SRH education), ethics & law in the curriculum (French & Steinauer, 2023)	Reviewing sexual and reproductive health (SRH) teaching in undergraduate medical education, including topics on abortion, conscientious objection, and interdisciplinary ethics-law sessions	Narrative review	Many curricula include issues of the “beginning of life,” abortion, conscientious objection, and exemplified by interdisciplinary sessions on ethics and law with case studies/vignettes.	Provide an integrative learning design model (SRH clinical science + ethics + law) that can be adapted for adolescent/student education to enable them to sort information, understand consequences, and avoid illegal/risky paths (e.g. illegal abortion drugs).
SRHR legal literacy (Tirado et al., 2023)	Measuring knowledge of abortion law and SRHR legal issues among new migrants in Sweden; and the need for educational programs	Cross-sectional survey	Comprehensive SRHR and sex education programs can include components that increase knowledge about safe/legal abortion and related SRHR laws.	Strengthening the argument that legal literacy is an important component of reproductive health education to prevent risky decisions and referrals to illegal services/drugs.
Science (life skills) & adolescent risk behavior (Mediawati et al., 2022)	Examining life skills and sexual risk behavior of adolescents in Indonesia; the role of schools and health institutions	Cross-sectional survey	Schools are encouraged to collaborate with health departments for sexual education counseling.	Supporting life skills-based learning designs and school-health service collaboration to prevent behaviors that increase the risk of unplanned pregnancy and can drive demand for illegal abortion drugs.
Ethics-law-access to services (youth) (Jain & Rastogi, 2024)	Examining the challenges of adolescent abortion	Ethics/policy analysis articles	Legal complexities can discourage medical professionals from	Underscore the importance of clear legal education (rights, procedures,

Pillar Focus (Science/Ethics/Law)	Purpose/Scope	Method/Design	Key Findings (summarized)	Implications for Integrating Learning & Preventing Illegal Abortion Drug Distribution
	access in the Covid-19 landscape; the intersection of various laws and their impact on service providers		providing services; adolescent access to safe, timely, and affordable abortions becomes difficult, especially when access to services is limited.	limitations) and ethics education to reduce the “grey zone” that encourages the search for illegal drugs/paths when formal access is hampered.
Professional ethics & the impact of legal restrictions (Chen et al., 2023)	Discusses the moral distress of healthcare workers following the Dobbs ruling when the law restricts abortion services despite clinical/ethical indications.	Clinical ethics article (virtue-based approach)	Legal restrictions can hinder the provision of evidence-based services that are considered ethical; resulting in emotional/moral distress for clinicians and burden for patients.	Provides a basis for incorporating ethical dimensions (values, virtues, responsibilities) into SRH learning so that students understand ethical-legal conflicts and systemic risks that can divert patients to illegal options (e.g., illegal abortion drugs). It is relevant to formulate
Professional ethics & compliance/tension with the law (Lyerly et al., 2024)	Examining the moral obligations of physicians in the post-Dobbs landscape from the perspectives of conscience, professional ethics, and civil disobedience	Ethics article (Hastings Center Report)	Highlighting moral dilemmas and institutional support for health workers in facing legal-ethical conflicts related to reproductive care.	transcendental ethics/ deep ethics (formation of conscience, moral responsibility) as part of learning, while also showing that legal-ethical tensions can influence patient access routes and the risk of illegal practices.
Criminal law & accountability in illegal abortion practices (Indonesia) (Nathania et al., 2025)	Examining criminal liability related to the misuse of hard drugs for illegal abortion practices in Indonesia	Criminal law study articles	Linking the rise in illegal abortion practices to unwanted pregnancies (influenced by lack of information, teenage socializing); focusing on criminalizing perpetrators, including those who assist/facilitate them.	Becoming the core material for legal literacy (criminal) in SRH learning for prevention: understanding the legal consequences of the use/distribution of hard drugs for illegal abortion and the social factors that trigger demand.
Abortion drug laws & impact on access to other drugs (fair notice) (Russo, 2024)	Analyzing the implications of state abortion laws (US) and the issue of due process fair notice; the impact of abortion medication restrictions on access to other prescription drugs	Legal analysis article	Restrictions on abortifacient drugs can hinder patients' (including those with disabilities) access to needed prescription drugs.	Relevant to pharmaceutical legal literacy learning: regulation of abortion drugs can have a broad impact on drug access; students need to understand the legal-informational aspects to prevent misinformation and misuse/illegal distribution.
Health workers' attitudes towards changes in abortion law (Finney et al., 2024)	Examines the impact of Texas abortion law on the attitudes of medical students, residents, and faculty; the need for	Attitude survey study (academic setting)	Many participants supported education about legal changes, limited counseling, and abortion training; there were gender	Strengthening the need for legal literacy updates in reproductive health curricula, so that prospective health workers understand regulatory changes and their impact

Pillar Focus (Science/Ethics/Law)	Purpose/Scope	Method/Design	Key Findings (summarized)	Implications for Integrating Learning & Preventing Illegal Abortion Drug Distribution
Ethics-law-sociocultural (contraception/abortion) (Obalum & Agwu, 2023)	education about legal changes Analyzing the laws and ethics of contraception, sterilization, and abortion along with socio-cultural-religious issues	Normative analysis article	differences in some opinions. Places abortion at the intersection of bioscience, ethics, law, and socio-cultural/religious values; useful for both medical and non-medical practitioners.	on counseling – which, if unclear, can encourage informal/illegal referrals. Strengthening the design of transcendental ethics learning (mapping religious/social values) connected to science and law; important for the context of acceptance/rejection and prevention of illegal practices. Useful for comparison: learning can include comparative studies of regulations and discussions of ethics (conscientious objection) so that students understand variations in legal regimes and their impact on practice/access – often related to shifts to illegal channels.
Legal framework for abortion & ethical implications (conscientious objection) (Gómez, 2024)	Mapping the legislative landscape of legal termination of pregnancy in Mexico and its ethical-legal implications	Policy/bioethics articles	Changes to the definition/threshold of criminalization (e.g. after 12 weeks) and the issue of conscientious objection by health workers have ethical-legal implications.	



Figure 1. Evidence map review matrix

The evidence matrix positions the prevention of the distribution of illegal abortion drugs as a matter of legal certainty, law enforcement, and platform governance, which requires strengthening normative understanding

and application competencies for the public and prospective health workers. In the Indonesian context, a study of the distribution of illegal abortion drugs on digital platforms confirms the link between easy access

to illegal drugs and the increase in cases of criminally induced abortions, while also highlighting the problem of weak oversight and enforcement in the digital space despite the existing normative framework in the Criminal Code and the Health Law (Herdian & Andriasari, 2025). In health law theory, understanding the relationship between health law and medical law is also relevant because medical services (including SRH consultations/referrals) are not only determined by clinical aspects, but are intertwined with legal dimensions that regulate the practice and responsibilities of the profession (Putra & Kemalasari, 2022).

The direction of criminal policy reform on the issue of illegal abortion drugs primarily targets two nodes: the effectiveness of criminalization and enforcement in the digital supply chain, and the design of platform oversight to disrupt access. Juridical-empirical studies on the circulation of illegal abortion drugs on digital platforms highlight that the practice remains difficult to control due to a lack of oversight and weak enforcement on digital platforms, thus necessitating improvements to criminal policy and oversight mechanisms (Herdian & Andriasari, 2025). This finding is consistent with other studies on illegal transactions in e-commerce (although the object is different), which concluded that the minimal responsibility of platform organizers and weak supervision of online transactions requires synergy between law enforcement officials and platform providers to tighten regulations and supervision (Britney & Zakaria, 2025). On the other hand, a study on consumer protection against counterfeit products in e-commerce underscored that the national framework is not yet optimal in ensuring platform accountability, seller verification, and product oversight, and recommended strengthening platform obligations and the use of tracking/audit technology as a counterweight to stricter regulations (Santiago et al., 2025).

Doctrinally, the core problem with the sale of illegal abortion drugs on digital platforms is not simply the presence or absence of prohibitive norms, but rather how these norms are translated into operational platform obligations. Consumer protection studies emphasize that without strengthening platform responsibilities in seller verification, product oversight, and online dispute resolution mechanisms, legal protection will be suboptimal (Santiago et al., 2025). This finding aligns with a study of law enforcement on illegal transactions in e-commerce, which concluded that oversight is weak and there is a need for synergy between law enforcement and platforms to tighten regulations and oversight (Britney & Zakaria, 2025). In the context of illegal abortion drugs, an Indonesian study points to weak oversight of digital platforms as one of the reasons why it is difficult to control illegal

abortion practices despite existing regulations (Herdian & Andriasari, 2025). The synthesis of these three studies supports a shift from a "reactive" approach (takedown after a report) to a platform due diligence approach (verification, audit, tracking, and sanctions), as oversight weaknesses are a recurring factor in various forms of e-commerce illegality (Britney & Zakaria, 2025; Herdian & Andriasari, 2025; Santiago et al., 2025).

According to Post-Dobbs literature, once abortion is criminalized, it is possible for digital traces (e.g., data from apps, search history) to be used by law enforcement to identify and prosecute anyone suspected of performing abortions (Friedman et al., 2022). The post-Dobbs situation has also increased service provider concerns, as it increases the risk of significant liability (criminal and private lawsuits), and could shape the behavior of clinicians and institutions (Shachar, 2022). Through a lens of practice in health facilities, an ethical-legal perspective on the information gathering undertaken by officers working in emergency installations reflects the tension between the responsibility of medical professionals to the healthcare clientele, the interests of law enforcement agencies, and the need for legal-ethical standards in the provision of information/evidence to respond to officers in a manner that is acceptable (Simon et al., 2023). Specifically in "self-managed abortion", the nursing-ethics literature emphasizes the need for protecting patient privacy and careful clinical practice when reporting and managing complications (Manns-James et al., 2023).

From a health law perspective, the quality of services and patient protection in digital channels depends on the configuration of ever-changing norms, especially regarding privacy/data and professional liability, which is often seen as an obstacle to the implementation of telemedicine (Karahbolad & Nasrullah, 2025; Santoso et al., 2024; Vicente et al., 2022). In line with this, the need for "legal literacy" does not stop at normative knowledge, but rather practical competence to assess legal risks when accessing health services/products through digital platforms in a regulatory ecosystem that is still developing and not yet uniform (Vicente et al., 2022; Wulandari & Febrianti, 2022). First, this competency includes an understanding of the legal risks of distributing/accessing healthcare services via telemedicine, including the uncertainty of practice licensing and standards of responsibility (Durojaiye et al., 2022). Second, legal literacy must include data protection and confidentiality because cybersecurity and patient privacy issues are recurring concerns in telemedicine (Ali et al., 2024; Durojaiye et al., 2022; Karahbolad & Nasrullah, 2025). Third, changing norms and liability concerns can limit the scope for clinical counseling and encourage independent

information/service seeking, especially when the population's digital health literacy varies (Rachmani et al., 2022). Strengthening training and institutional support for healthcare workers is a crucial enabler for ensuring legal compliance, service quality, and patient safety are achieved simultaneously (Nascimento et al., 2023).

Approachcase-based learning (CBL) relevant to digital-health legal literacy because education in the digital age demands the integration of critical reasoning and ethics as technology mediates healthcare services (Shuja, 2025). Telemedicine improves patient access and privacy, with a remote care model for evaluating abortion eligibility using telehealth followed by delivery of abortion pills recognized by the FDA as the standard method (Raifman et al., 2024; Song et al., 2022). Issue abortion pills it is suitable for a series of scenarios because platform-based practices can take place through asynchronous consultations and medication delivery, while also presenting identity verification barriers and privacy breach risks. Victa et al. (2024) which triggers the need for user anonymity (Dolgins et al., 2025). In the post-contextDobbs, self-managed abortioncan be effective and chosen for its autonomy and privacy, but carrieslegal riskswhich needs to be mapped explicitly in learning (Moseson et al., 2025; Ray, 2023). CBL can test the identification of actors and elements against the law, while also assessingplatform responsibilityand the adequacy of OTT regulations in Indonesia (Pieter et al., 2024), including the "care vs datafication" dilemma when platform privacy claims are intertwined with data exploitation (Martin et al., 2024) and decreased trust in clinicians and privacy of health information post-legislation (Swanson et al., 2023).

Conclusion

The evidence matrix shows that preventing the circulation of illegal abortion drugs is most effective when designed as an integrated intervention across three pillars such as law (normative certainty, criminal policy reform, and enforcement), SRH science (preventing unwanted pregnancies through health literacy and life skills), and ethics (managing value conflicts, conscientious objections, and moral distress). In the Indonesian context, the evidence positions the digital ecosystem as a key vulnerability: easy access and weak platform oversight increase the risk of criminal abortion, necessitating a shift from a reactive approach to platform due diligence (verification, auditing, tracking, and sanctions) and public education on criminal consequences. On the educational side, the consistency of findings supports cross-disciplinary case/vignette-based pedagogy to clarify the boundaries

of counseling, referrals, data privacy, and pharmaceutical regulation.

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Conflicts of Interest

The authors declare no conflict of interest.

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