Mapping Research Trends on Illegal Abortion Behavior: A Bibliometric Study

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Notes	ABSTRACT
  	Research on the topic of illegal abortion is quite a concern, but more discussed macro in a legal point of view and health policy. Micro-analysis with a similar topic has been conducted on a limited basis with the background of the issue of illegality which cannot prevent abortion behavior. This study aims to analyze the scientific literature to find general trends and analyze indicators related to the topic of behavior from illegal abortion practices around the world. This paper uses a bibliometric methodology, utilizing data taken from the Scopus database from 1968 to 2021, and visualizing the data using the VOSviewer. 310 papers from different nations were uncovered in the investigation. When the study's findings are compared to the total number of citations and related publications, it becomes clear that the United States and the United Kingdom continue to dominate research on illegal abortion activity. The great majority of articles on this topic are mostly in the social science sector. By identifying keywords, it can be seen that the majority of research topics continue to center on large-scale issues including abortion, contraception, and unsafe abortion. This study enables us to define unlawful abortion in an individual setting as the behavior a person engages in when deciding to abort a pregnancy, regardless of whether it is carried out by themself, another person, medical professional, health workers, health facilities, or by other parties that deviate from the abortion laws that are in effect in the nation. This study offers crucial conclusions and suggestions for future thematic research opportunities that are sustainable. **Keywords:** Bibliometric; abortion; research mapping

1. INTRODUCTION

Abortion is the most attention of legal and policy experts worldwide, especially regarding legal change. For example, the United States criminalized abortion in the late nineteenth century and then decriminalized abortion in the 1960s and early 1970s (Donohue & Levitt, 2001; Jacobs,

2019). Similarly, Romania initially implemented strict anti-abortion policies in 1966, only to adopt a more liberal approach towards abortion and contraception by the late 1980s (A. Singh et al., 2020). Argentina has also witnessed modifications to its abortion rules due to feminist advocacy, despite the practice being illegal since 1922 (Monte, 2017). Many African countries are currently undergoing reforms in their illegal abortion policies, with some allowing exceptions to safeguard the lives of pregnant women (Harrison, 2019; Hunter et al., 2021). These examples demonstrate the dynamic nature of abortion policy, influenced by factors such as abortion practices, enforcement processes, levels of repression, and evolving experiences of women over time.

From a reproductive justice perspective, abortion services are not only a public health problem but the health consequences of unsafe abortion for abortionists (Committee on Health Care for Underserved Women, 2020; Lattof et al., 2020). This suggests the consequences of different resources on each person's ability to seek and have an abortion (Coast et al., 2021; Lavelanet et al., 2018; Lavelanet, Johnson, et al., 2020). For example, one of the effects of criminalizing abortion is likely to be higher exclusion from safe abortion services for those who cannot afford it (Coast et al., 2021; Lavelanet, Major, et al., 2020).

Although the risk of death from abortion is still lower than that of childbirth (Raymond & Grimes, 2012), historical data show that illegal abortion will end unwanted pregnancies in an unsafe manner (Guttmacher Institute, 2022; World Health Organization, 2008). Currently, about 25 million women worldwide have unsafe abortions every year, and complications from these unsafe procedures account for as much as 15% of all maternal deaths, about 44,000 per year (Ganatra et al., 2017; Kassebaum et al., 2014).

The problem of illegal abortion research is highly concerning, although it is examined more broadly from a legal and health policy standpoint. Micro-analysis of bibliometrics with a similar topic has been conducted on a limited basis by Dias (2014) in Brazil with the background of the issue of illegality which cannot prevent abortion behavior from being punished, but has negative consequences on women's health to have unsafe abortions. There is no possibility of health workers willing to help carry out an abortion; it is expensive to pay for an abortion with a safe procedure.

With these limitations, it is believed that abortion has become illegal due to the influence of policies that undergo changes in services to women who have abortions. This is a challenge for the government in reducing maternal mortality due to unsafe abortion. Therefore ,it becomes imperative to know the scientific production of illegal abortion behavior. This study aims to systematically analyze the scientific literature to find general trends related to the behavioral topic of illegal abortion practices worldwide in a systemic way.

2. METHODS

This paper used a descriptive research method with a bibliometric approach and content analysis to analyze the scientific literature. This study emphasized numerical data or numbers processed through statistical methods in descriptive research to obtain the meaning of the general description of the topic under study. The data collected included all metadata provided in the article as well as literature sources generated from the Scopus database. Scopus selection was based on the reason this database had a higher number of indexed documents.

As a bibliometric study, this research utilized Excel and VOSviewer to analyze trends and visualize the results. The data in this paper was taken from April 14, 2022. The first stage was

the search for the words or phrases "abortion" AND "behavior" AND "illegal" in the title, abstract, and keywords of the document, resulted in 428 articles (Figure 1). The next stage was to limit the category of article publications and reviews to English-language journals. In addition, the subject area category is was limited to medicine, social sciences, arts and humanities, nursing and psychology. The synthesis was carried out over a period of 53 years between 1968 and 2021 (310 documents were obtained in the 2nd stage).

Furthermore, this study looked at the general trend of publications. It analyzed key indicators, such as the distribution of journals, the impact index of influential journals, widely cited articles, the average number of articles, average citations per year, influential countries and influential authors. In addition, this paper used VOSviewer software to analyze and visualize citation networks between journals, author networks between countries, and keyword networks.
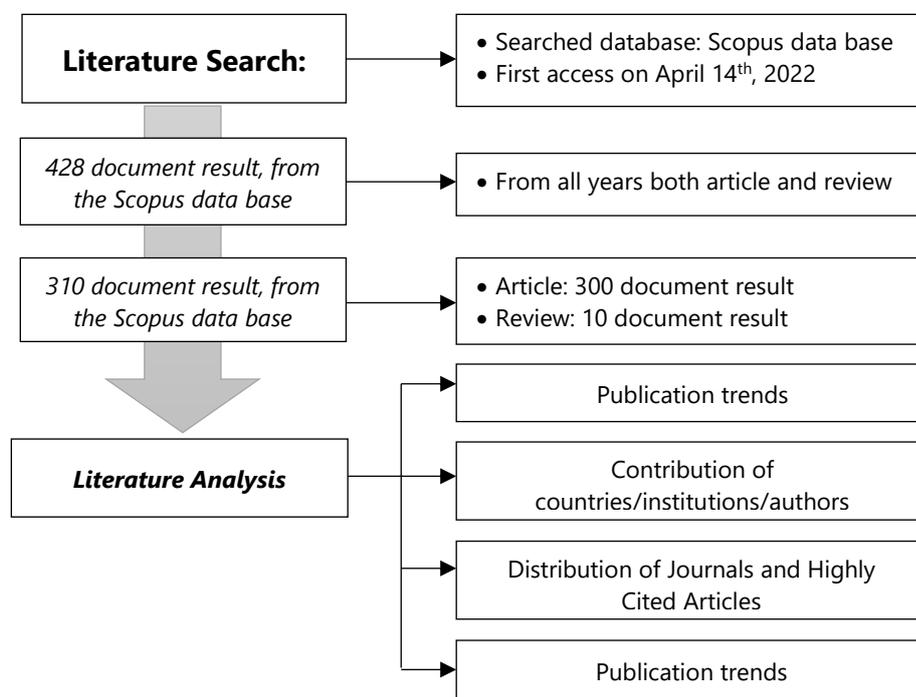
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Figure 1. Retrieval Process

3. RESULTS AND DISCUSSION

Publication Trends

The Scopus database provides articles relating to the first illegal abortion behavior in 1968 entitled 'Sequels of Unwanted Pregnancy.: A Follow-up of Patients Referred for Psychiatric Opinion' written by M. Clark (1968) and published by the Lancet. This article discusses termination of pregnancy through abortion for the majority of unmarried women from a psychology point of view. In the following years, articles with similar topics increased from 1991 to 1994.
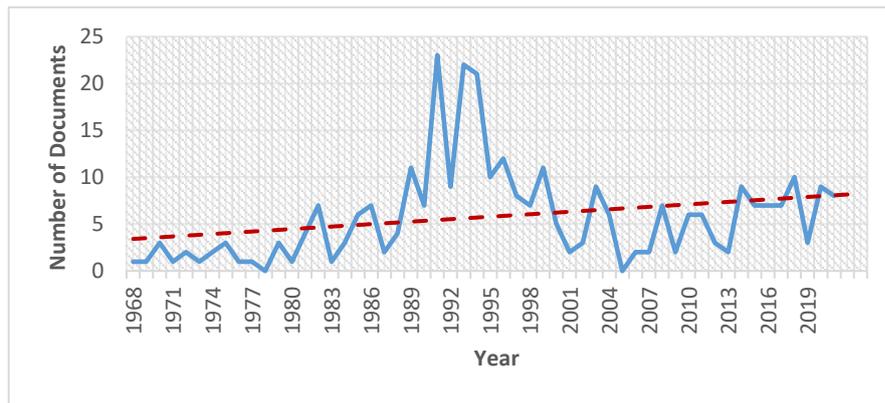
Figure 2. Publication Trends

The main issue of increasing articles was related to the high maternal mortality caused by illegal and unsafe abortions (Hjalmarsson et al., 2021; Paltrow et al., 2022); controversy over the criminalization of induced abortion and the legalization of the use of Cytotec (Ferrari & Peres, 2020) and discusses the poor sexual and reproductive behavior of adolescents in several countries in Africa as a cause of breaking up schooling, illegal abortion and child neglect (Oyeyipo et al., 2020). Furthermore, since 1995 the number of articles on the same topic decreased on average below ten articles. However, the trend of writing articles on illegal abortion behavior is expected to continue to increase (Figure 2).

Influential Journals

Based on the results of processing 310 articles, 189 sources were obtained from journals with 3139 citations. Table 1 shows the top 10 most influential journals based on the highest number of citations. Studies in Family Planning, Reproductive Health Matters and Social Science and Medicine are the three most cited journals. Based on the comparison of the number of citations with the number of articles cited, the Journal of Addictive Diseases, AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV, and Political Psychology were found as the top three quality journals. While the results of the SCImago Journal Rank (SJR) assessment, journals with a subject area in social science turned out to have a higher scientific impact. The top three journals with the highest impact include Political Psychology, Social Science and Medicine and Studies in Family Planning.

Table 1. Influential Journal Based on Number of Articles and Citations

Rank	Name of Journal	Number of Articles (A)	Number of Citations (C)	(C/A)	Subject Area	SJR (2020) Impact
1	Studies in Family Planning	16	395	24.69	Social Science	1.529
2	Reproductive Health Matters	10	305	30.50	Medicine	0.846*
3	Social Science and Medicine	5	257	51.40	Arts and Humanities, Social Sciences	1.913
4	Journal of Addictive Diseases	1	132	132	Psychology, Medicine	0.458
5	East African Medical Journal	6	102	17	Medicine	0.102

Rank	Name of Journal	Number of Articles (A)	Number of Citations (C)	(C/A)	Subject Area	SJR (2020) Impact
6	International Journal of Gynecology and Obstetrics	6	101	16.83	Medicine	0.895
7	AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV	1	83	83	Social Sciences, Psychology, Medicine	1.116
8	Political Psychology	1	76	76	Arts and Humanities, Social Sciences, Psychology	2.419
9	European Journal of Contraception and Reproductive Health Care	6	70	11.67	Medicine	0.664
10	Population Studies	1	60	60	Arts and Humanities, Social Sciences	1.318

Source: Researcher's analysis from SCOPUS
Notes: *2018

Influential Authors and Publications Countries

Based on the author's criteria, 615 authors produced 310 articles by 2021. Table 2 shows the ten most influential authors in two categories based on the number of articles and citations. Rasch is the most influential writer in both categories. Scopus data provides articles written by Rasch related to pregnancy from 2000 to 2008 by producing 3 publications and has been quoted as many as 269 citations. Rasch is affiliated at Odense Universitetshospital, Odense, Denmark.

Based on the quality of the articles, by dividing the number of citations by the articles, the names of authors Keegan, Parva, Finnegan, Gerson, and Belden are considered the authors with the best article quality. The five authors are from the United States with the same affiliation at Lankenau Hospital, Department of Obstetrics and Gynecology, collaborating on an article entitled 'Addiction in pregnancy'. They carry out empirical studies in their writings. The finding is that substance abuse (legal and illegal) during pregnancy affects the baby's health before delivery. For example, the use of opiates, cocaine, alcohol, tobacco, marijuana, and amphetamines as the main cause of spontaneous abortion, in addition to other adverse effects (Keegan et al., 2010).

Table 2. Influential authors

Based on the Number of Articles					Based on the Number of Citations				
Rank	Author	Number of Articles (A)	Number of Citations (C)	Quality (C/A)	Rank	Author	Number of Articles (A)	Number of Citations (C)	Quality (C/A)
1	Vibeke Rasch	3	269	89.67	1	Vibeke Rasch	3	269	89.67
2	Carukshi Arambepo-la	3	24	8	2	Margrethe Silbersch-midt	2	250	125
3	Lalini C. Rajapaksa	3	24	8	3	Joan Keegan	1	132	132
4	Khama O. Rogo	3	51	17	4	Mehdi Parva	1	132	132
5	Akinrinola Bankole	3	48	16	5	Mark Finnegan	1	132	132
6	Susheela Singh	3	57	19	6	Andrew Gerson	1	132	132
7	Margrethe Silbersch-midt	2	250	125	7	Michael Belden	1	132	132

Based on the Number of Articles					Based on the Number of Citations				
Rank	Author	Number of Articles (A)	Number of Citations (C)	Quality (C/A)	Rank	Author	Number of Articles (A)	Number of Citations (C)	Quality (C/A)
8	Daniel Grossman	2	78	39	8	John M. Paxman	2	110	55
9	Michelle J. Hindin	2	32	16	9	Dominique Meekers	2	100	50
10	Joseph G. Karanja	2	9	4.50	10	King K. Holmes	2	84	42

Source: Researcher's analysis

After analyzing the journals and affiliations of the most influential authors in publishing articles, this paper navigates between 58 countries, including Europe and Africa, that produce the highest article production (Table 3). Some of the most influential publication countries include developed countries such as the United States and Britain. Nigeria and Kenya are developing countries in Africa in the top ten countries with the highest number of articles and citations.

Table 3. Influential of publication countries

Based on the Number of Articles					Based on the Number of Citations				
Rank	Country	Number of Articles (A)	Number of Citations (C)	Quality (C/A)	Rank	Country	Number of Articles (A)	Number of Citations (C)	Quality (C/A)
1	United States	57	1039	18.23	1	United States	57	1039	18.23
2	United Kingdom	17	316	18.59	2	United Kingdom	17	316	18.59
3	Nigeria	14	144	10.29	3	Denmark	3	269	89.67
4	Kenya	9	235	26.11	4	Kenya	9	235	26.11
5	Brazil	8	179	22.38	5	Brazil	8	179	22.38
6	South Africa	6	57	9.50	6	Nigeria	14	144	10.29
7	Sweden	6	74	12.33	7	Tanzania	3	137	45.67
8	Canada	6	84	14	8	Peru	3	112	37.33
9	Sri Lanka	6	50	8.33	9	Canada	6	84	14
10	India	5	34	6.80	10	Sweden	6	74	12.33

Source: Researcher's analysis

Influential Articles

Based on Table 4, there are 10 most cited publication titles. In terms of title, the article entitled "Adolescent Girls, Illegal Abortions and 'Sugar-Daddies' in Dar es Salaam: Vulnerable Victims and Active Social Agents" published by Social Science and Medicine was the most cited (contributing 208 citations) with an average annual citation of 9.45. The first rank in terms of average citations per year is occupied by a journal entitled "Addiction in Pregnancy" written by Keegan (2010). This article was published by the Journal of Addictive Diseases in 2010 with an annual citation average of 10.13. As explained in the previous sub-discussion, Keegan's writings are in great demand, especially with regard to abortion behavior carried out through drug abuse during pregnancy. This is in line with the articles written by Paltrow et al., (2022) and Hjalmarsson et al. (2021).

Table 4. Influential articles

Rank	Title	Authors	Year	Source Title	Total Citations	Year Range of Citations	TC/Y
1	Adolescent Girls, Illegal Abortions and 'Sugar-Daddies' in Dar es Salaam: Vulnerable Victims and Active Social Agents	Silberschmidt, M., Rasch, V.	2001	Social Science and Medicine	208	2002-2022	9.45
2	Addiction in Pregnancy	Keegan, J., Parva, M., Finnegan, M., Gerson, A., Belden, M.	2010	Journal of Addictive Diseases	132	2010-2022	10.13
3	Sexual and reproductive health among primary and secondary school pupils in Mwanza, Tanzania: Need for intervention	Matasha, E., Ntembelea, T., Mayaud, P., (...), Mujaya, B., Tendo-Wambua, L.	1998	AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV	83	2001-2021	3.46
4	Authoritarianism and economic threat: Implications for political behavior	Rickert, E. J.	1998	Political Psychology	76	2001-2022	3.17
5	The Brazilian Experience with Cytotec	Barbosa R.M., Arilha M.	1993	Studies in Family Planning	71	1994-2021	2.45
6	Self-Induction of Abortion Among Women in the United States	Grossman D., Holt K., Pena M., Lara D., Veatch M., Cordova D., Gold M., Winikoff B., Blanchard K.	2010	Reproductive Helath Matters	69	2011-2022	5.75
7	Sexual behavior, contraceptive practice, and reproductive health among Nigerian adolescents	Nichols, D., Ladipo, O.A., Paxman, J.M., Otolorin, E.O.	1986	Studies in Family Planning	64	1988-2019	1.19
8	Sexual initiation and premarital childbearing in Sub-Saharan Africa	Meekers, D.	1994	Population Studies	60	1995-2021	2.14
9	Reproductive health in Romania: reversing the Ceausescu legacy	Hord, C., David, H.P., Donnay, F., Wolf, M.	1991	Studies in Family Planning	56	1992-2021	1.81
10	The Politics of Reproduction in Ceauşescu's Romania: A Case Study in Political Culture	Kligman, G.	1992	East European Politics & Societies	55	1993-2021	1.83

Source: Researcher's analysis from SCOPUS

It is interesting to note that political behavior also influences abortion behavior and becomes an influential article that is included in the top 10. One of the articles by Rickert (1998) states that the policy of preventing women from having abortions is one of the state's agenda to support social policies and strengthen the political agenda because it is seen to influence systemic changes in a country's economy. This is in line with the article Kligman (1992) which focused on the intersection between politics and the cycle of life, including the practice of abortion through strict anti-abortion policies during the Ceauşescu regime.

Keywords Analysis

Mapping the results of research publications, "illegal abortion behavior" has 353 keywords from 310 articles based on author keywords. Furthermore, to carry out the analysis, keyword network restrictions were carried out based on word repetition to filter 39 corresponding keywords from one topic to another and create 7 clusters. Figure 3-4 shows this study presents three different keyword network visualizations from VOSviewer, including network and overlay visualization.

Figure 3 presents a visualization of the network, where the keywords 'abortion behavior' and 'illegal' are larger than the others determined by the number of times the keywords appear. More frequent views show larger letters and circle sizes in the VOSviewer visualization. Keywords with the same color indicate that they are in the same cluster determining the close relationship between these keywords. Cluster 1 is characterized by 10 nodes, with a focus on unsafe abortion; Cluster 2 is characterized by 8 nodes, focusing on pregnancy, risk factors and contraceptive use; Cluster 3 is characterized by 6 nodes, with a focus on induced abortion; Cluster 4 is characterized by 6 nodes, focusing on medical abortion; Cluster is 5 characterized by 4 nodes, with a focus on contraception and abortion; Cluster 6 is characterized by 3 nodes, with a focus on family planning and unintended pregnancy; and Cluster is 7 marked with 2 nodes, with a focus on decision making.

Meanwhile, Figure 4 presents a visualization of trends from year to year. The overlay visualization was chosen as a fairly valid tool for verifying recent trends in academic topics, and it also helps classify items using a time scale. Each cluster is colored differently based on the year of publication. For example, the keyword 'abortion' is presented in light blue, which indicates the era between 2010-2012, while the keyword 'contraception' is around 2004. For the yellow area, keywords that appear include unintended pregnancy, family planning, sexual health, and human rights have become the latest research topics related to the topic of illegal abortion behavior that has emerged since 2016. The keywords that still appear frequently are dominated by articles published in 2010 and below. Therefore, it can be concluded that the topics that have emerged in recent years are still rarely discussed in the academic field.
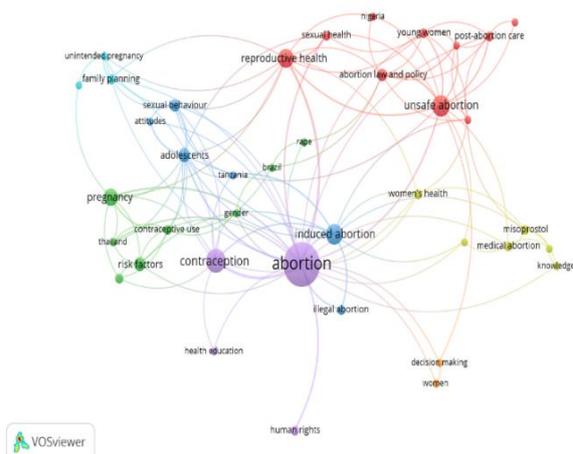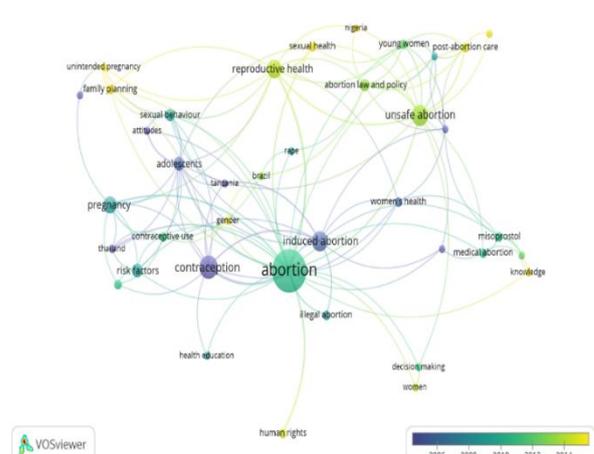

Figure 3. Keyword network visualization

Figure 4. Keyword overlay visualization

Unsafe Abortion Issues Studies

The first cluster refers to the studies that have dealt with unsafe abortion. These include abortion law and policy, reproductive health, sexual health, and post-abortion care. Unsafe

abortion refers to the termination of a pregnancy by individuals who lack the necessary medical skills or in an environment that does not meet the minimum medical standards (Akande et al., 2020; World Health Organization, 2008). It often involves using unsafe methods, such as ingesting harmful substances, inserting objects into the uterus, or seeking assistance from unqualified practitioners (Erdman & Cook, 2020).

How is it different from illegal abortion? It is important to note that the terms "unsafe" and "illegal" are not mutually exclusive. Unsafe abortions can occur both in countries where abortion is legal but inaccessible or stigmatized and in regions where abortion is illegal (Lavelanet, Johnson, et al., 2020; World Health Organization, 2008). The illegality of abortion can contribute to unsafe practices, as individuals face barriers to accessing safe services (Anand et al., 2022; Crawford et al., 2023). Addressing both unsafe and illegal abortions requires comprehensive strategies focusing on improving access to safe and legal reproductive healthcare services, promoting education and awareness, and addressing the underlying societal factors contributing to these challenges.

Pregnancy, Risk Factors, and Contraceptive Use Studies

The second cluster refers to studies that address the view of pregnancy, risk factors and contraceptive use. The association between risk factors, pregnancy, and contraceptive use can vary depending on individual circumstances and factors. Certain risk factors can increase the likelihood of unintended or high-risk pregnancies. These risk factors may include inadequate or inconsistent contraceptive use, lack of access to contraceptive methods, limited knowledge about contraception, socioeconomic factors, educational disparities, cultural and social norms, and inadequate reproductive health care (Hinson et al., 2022). Individuals with these risk factors may be at a higher risk of experiencing unintended pregnancies. Contraceptive use prevents unintended pregnancies (Davis et al., 2020). Contraceptives are highly effective when used consistently and correctly in reducing pregnancy risk (A. Singh et al., 2020). However, inadequate or inconsistent use of contraception, such as incorrect or irregular use, can increase the chances of contraceptive failure and unintended pregnancies.

Access to and effective use of contraceptives have been shown to reduce the incidence of unintended pregnancies and subsequently decrease the need for abortion (Somba et al., 2014). When individuals have access to various contraceptive options and proper education and support, they are better equipped to prevent unintended pregnancies and make informed reproductive choices.

Induced Abortion Studies

The third cluster refers to studies that have dealt with the view of induced abortion, especially among adolescents. Illegal abortion and sexual behavior are other essential issues. Induced abortion refers to the deliberate termination of a pregnancy through medical or surgical means (Hinson et al., 2022). When it comes to illegal abortions, they are performed in countries or regions where abortion is highly restricted or outright illegal, often resulting in clandestine and unsafe procedures (Anand et al., 2022; Lavelanet, Johnson, et al., 2020).

Social, cultural, and legal factors can influence sexual behavior, induced abortion, and illegal abortion. Social attitudes, norms, and stigma surrounding sexuality and abortion can impact individuals' choices, access to contraception, and decisions about seeking safe and legal abortion services (Fatusi et al., 2021; Valizadeh et al., 2021). Legal frameworks that restrict or

criminalize abortion can contribute to individuals resorting to unsafe practices, increasing the health risks of illegal abortions.

Medical Abortion Studies

The fourth cluster refers to studies that have focused on medical abortion. Among the medical abortion issues that have been addressed the women's health, misoprostol, and knowledge. Medical abortion, also known as medication abortion, involves using medications to terminate a pregnancy (Hinson et al., 2022). It is a safe and effective method used within the recommended gestational age and under appropriate medical supervision (Kerestes et al., 2021). Medical abortion allows women to control their reproductive choices and can be a less invasive option than surgical abortion. By providing access to safe medical abortion, women's health and well-being can be protected, as they can avoid the risks associated with unsafe and illegal procedures (S. Singh et al., 2019).

Access to accurate and comprehensive information about medical abortion is crucial for women to make informed decisions about their reproductive health. Knowledge about the process, effectiveness, potential side effects, and post-abortion care empowers women to understand their options and make decisions aligned with their preferences and health needs (LaRoche et al., 2021; Tschann et al., 2021). Informed decision-making promotes autonomy, ensures that women are prepared for the medical abortion process, and allows them to seek appropriate medical care when needed.

The Role of Contraception in Reducing Abortions Studies

The fifth cluster refers to the studies that have addressed contraception and abortion. Health education and human rights are other vital issues. Contraception empowers individuals to take control of their reproductive health and exercise their reproductive autonomy (Sattar et al., 2020). By providing individuals with the means to prevent pregnancies, contraception allows them to make informed decisions about when, if, and how many children they want to have (Paltrow et al., 2022). This autonomy can help individuals avoid unintended pregnancies, decreasing the demand for abortions (Hinson et al., 2022).

The role of contraception in reducing abortion aligns with human rights principles, including the right to life, health, privacy, equality, and non-discrimination (Erdman & Cook, 2020; Lavelanet, Johnson, et al., 2020). Ensuring access to contraception is essential to upholding these rights, as it enables individuals to exercise their reproductive autonomy and make choices that best suit their circumstances and aspirations.

Family Planning Issues Studies

The sixth cluster refers to studies that have dealt with the views of family planning and unintended pregnancy. Family planning is crucial for preventing unintended pregnancies (Kathpalia, 2016). It empowers individuals to make informed choices about their reproductive health, promotes reproductive autonomy, improves health outcomes, and has socioeconomic benefits. By addressing barriers to access, promoting comprehensive sexual education, and ensuring the availability of a wide range of contraception methods, family planning programs reduce unintended pregnancies and promote the well-being of individuals, families, and communities (Sharma et al., 2020).

Decision-making Studies

Finally, the seventh cluster refers to studies that address the view of decision-making. The legal and regulatory environment surrounding abortion can significantly impact women's decision-making. In countries or regions where abortion is highly restricted or criminalized, women may face significant barriers in accessing safe and legal services. Restrictive laws, lack of access to healthcare facilities, stigma, and misinformation can limit women's options and decision-making power, potentially leading to unsafe practices or denial of care (Hinson et al., 2022; Osur et al., 2015).

The recognition and protection of women's reproductive rights play a crucial role in ensuring their decision-making autonomy (Arambepola & Rajapaksa, 2014). Access to safe and legal abortion services is fundamental to reproductive rights (Harrison, 2019). Governments and societies that prioritize reproductive rights provide an enabling environment for women to make decisions about their reproductive health, including the decision to have an abortion, without undue barriers or interference (Zandberg, 2021). It is essential to respect women's autonomy and decision-making regarding their reproductive health, including their choices around abortion. Ensuring access to accurate information, comprehensive counseling, non-judgmental healthcare services, and supportive legal frameworks promotes women's rights and well-being in reproductive decision-making (Lavelanet, Johnson, et al., 2020).

4. CONCLUSION

The findings revealed that the relationship between family planning, human rights, and illegal or unsafe abortion texts has been acknowledged. However, limited research and organizational attention has been given to this issue, and there is a lack of scientific collaboration among researchers. The interconnection between family planning and human rights is evident as family planning services and education play a crucial role in preventing unintended pregnancies, which is integral to sexual health. Protecting human rights guarantees individuals the freedom and resources to make informed choices regarding their reproductive and sexual health, free from discrimination, coercion, and rights violations.

Given the significance of abortion studies, it is recommended that universities and research centers, being crucial components of higher education, create opportunities to enhance research endeavors in this field. It is proposed to establish dedicated university research centers focusing on abortion-related topics to achieve this. Encouraging faculty members and academic researchers to produce books and articles on this subject, supporting research projects centered around abortion, organizing seminars and training courses, and facilitating communication among researchers interested in this area can significantly contribute to fostering extensive and high-quality research activities. These measures are essential for advancing knowledge and understanding in abortion studies.

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