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Family planning: bioethical dilemmas found in the literature

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Abstract

This integrative review, based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses method, investigates the bioethical dilemmas that emerge from family planning, in light of principlism. Data were collected based on literature research conducted at the Medline, Lilacs and Scopus databases, using the descriptors "family planning *and* bioethics." After applying the eligibility criteria, seven papers published between 2011 and 2018 were selected for content analysis, performed according to Bardin's proposal. The study identified four thematic categories: right to freedom and sexual/reproductive autonomy; government interference in family and reproductive planning; sociocultural and religious barriers to family planning; and technological enhancement for pre-embryo handling. Results suggest that scientific advances move faster than bioethical discussions, creating practical and theoretical dilemmas.

Keywords: Family Planning. Family Health. Sexual Health. Reproductive Health. Bioethics

Resumo

Planejamento familiar: dilemas bioéticos encontrados na literatura

O artigo traz resultados de revisão integrativa realizada conforme as recomendações do método Preferred Reporting Items for Systematic Reviews and Meta-Analyses. O objetivo era investigar, à luz do modelo principialista, os dilemas bioéticos que emergem do planejamento familiar, de acordo com a literatura. Os dados foram levantados em pesquisa nas bases Medline, Lilacs e Scopus, por meio do cruzamento dos descritores "family planning and bioethics". Após aplicação dos critérios de elegibilidade, sete artigos publicados entre 2011 e 2018 foram selecionados para compor o estudo. Esses artigos foram submetidos a análise de conteúdo, como proposta por Bardin. Quatro categorias temáticas foram observadas: direito a liberdade e autonomia sexual/reprodutiva; interferência de governos no planejamento familiar e reprodutivo; barreiras socioculturais e religiosas ao planejamento familiar; e aprimoramento de tecnologias voltadas à manipulação de pré-embriões. Os resultados sugerem que os avanços científicos andam mais rápido do que as discussões bioéticas, criando dilemas práticos e teóricos.

Palavras-chave: Planejamento familiar. Saúde da família. Saúde sexual. Saúde reprodutiva. Bioética.

Resumen

Planificación familiar: dilemas bioéticos encontrados en la literatura

Este artículo presenta los resultados de una revisión integrativa conforme al Preferred Reporting Items for Systematic Reviews and Meta-Analyses. Su objetivo fue investigar, desde el modelo principialista, los dilemas bioéticos que surgen de la planificación familiar en la literatura. Para la recopilación de datos se llevó a cabo búsquedas en las bases de datos Medline, Lilacs y Scopus utilizando los descriptores "family planning and bioethics". Tras la aplicación de criterios de elegibilidad, se seleccionaron siete artículos publicados entre 2011 y 2018. Se aplicó a los artículos el análisis de contenido propuesto por Bardin. Se obtuvieron cuatro categorías temáticas: derecho a la libertad y autonomía sexual/reproductiva; interferencia del gobierno en la planificación familiar y reproductiva; barreras socioculturales y religiosas a la planificación familiar; y mejora de tecnologías relacionadas al manejo de los preembriones. Los resultados apuntaron que los avances científicos van más rápido que las discusiones bioéticas, ocasionando dilemas prácticos y teóricos.

Palabras-clave: Planificación familiar. Salud de la familia. Salud sexual. Salud reproductiva. Bioética.

Research

The authors declare no conflict of interest.

Family planning is understood as a set of interventions to regulate fertilization and guarantee the reproductive rights of each individual, requiring a systematization of educational processes and means that allow people to identify, access, and use contraceptive methods correctly. Family planning is important for contributing not only to population control, but also to the biopsychosocial well-being of individuals in the reproductive stage and who must exert full autonomy in decision-making [1,2].

Although birth control techniques are already well explored and considered a basic right of the individual, strong taboos concerning these practices still exist. In many social and religious contexts, opinions on contraceptive methods are controversial and polemic, making it difficult for men and women to exert freedom of choice over contraception [3]. On the other hand, countries with large demographic contingents, such as China and India, practice aggressive population control policies, rigidly monitoring the birth rate, which raises questions regarding the reproductive rights of their citizens [4].

This complex scenario is where family planning has been trying to consolidate itself, ensuring education and quality health care focused on sexual and reproductive rights, always respecting the sociocultural context of each population, promoting autonomy and defending the free will of individuals and couples [5]. Discussions and research focused on ethical, moral, philosophical, and political aspects related to family planning are therefore still necessary [6].

Given this context and considering the principlist model proposed by Beauchamp and Childress [7], this study sought to investigate the literature on bioethical dilemmas that emerge from family planning.

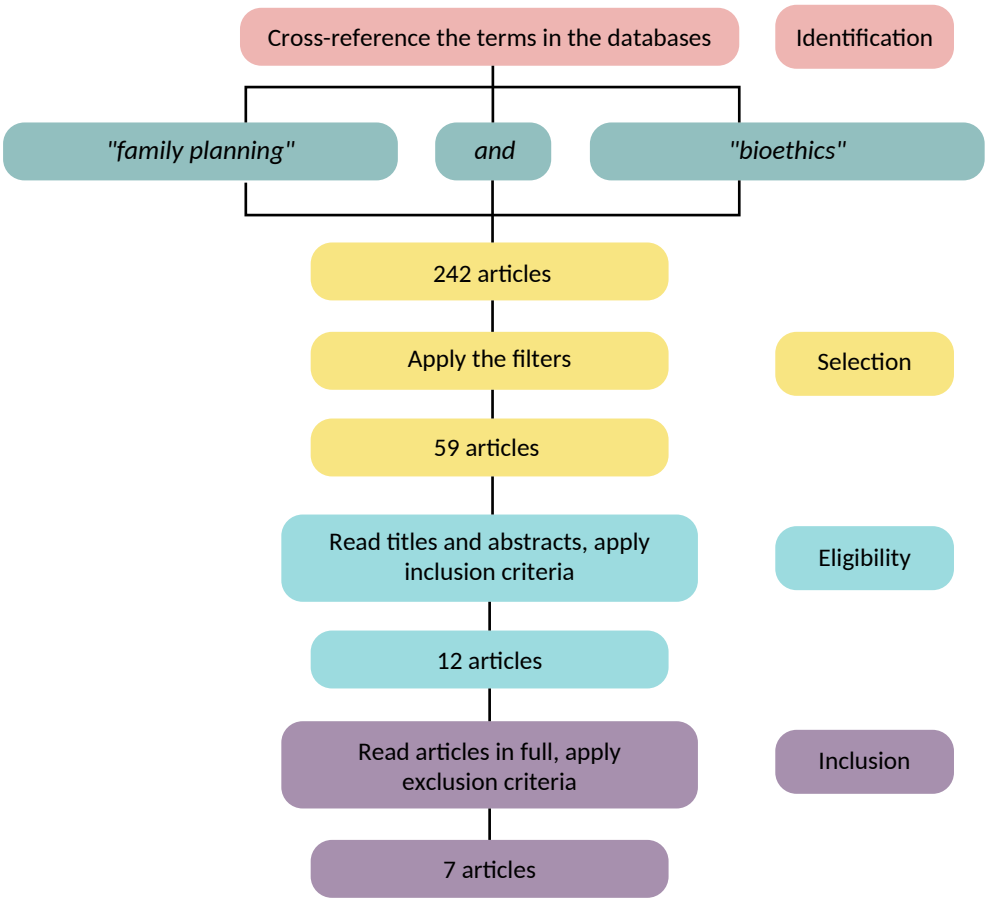
Method

This is an integrative review, a type of secondary study that critically synthesizes the knowledge available in the scientific literature at a given moment [8]. To standardize data collection, the present study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method [9], which divides this step into four phases: identification, selection, eligibility and inclusion. Throughout the process, we sought to answer the following research question: according to current scientific production, what bioethical dilemmas emerge from family planning?

Carried out in October 2019, the identification phase consisted of a literature search performed in the Medical Literature Analysis and Retrieval System Online (Medline), Latin American and Caribbean Health Sciences Literature (Lilacs), and SciVerse Scopus databases using the descriptors "family planning *and* bioethics."

In the second phase (selection of studies), we applied the following filters: original studies, language (English, Portuguese and Spanish) and year of publication (between January 2008 and October 2019). The time frame was established to ensure the timeliness of the bioethical issues in evidence. During the eligibility phase, the titles and abstracts of the selected articles were read to select those that met the inclusion criteria: 1) answer the research question; and 2) be a study with a target population consisting exclusively of human beings. After applying the exclusion criteria – 1) duplicate articles found in different databases; and 2) theses, dissertations, systematic and integrative reviews, editorials and technical notes – 12 studies were selected for full reading.

Figure 1. Diagram of the study selection flow, according to the PRISMA scale



Throughout data collection, two independent researchers conducted the search following the double-blind method recommended by PRISMA. Disagreements between the reviewers were resolved by a third investigator, who gave the final opinion. Finally, of the 242 articles initially identified in the databases, seven met all the above criteria.

After collection, data from these seven articles underwent category analysis, in which a text is broken-up into analogical-grouped categories based on the research question, as proposed by Bardin [10]: pre-analysis, exploration of the material, and treatment, inference, and interpretation of the results.

While skimming the texts during pre-analysis, the data were organized by annotations and later processed using an instrument created and validated by Ursi [11], which allowed us to minimize errors in transcription and translation, thus ensuring greater accuracy of the information collected.

We then explored the material by extracting record units (keywords and themes that emerged in the texts), which made up the first categorization. These initial categories were grouped thematically, generating intermediate categories that were, in turn, amalgamated into themes, thus resulting in the final categories. As the identification criterion, we used the representativeness of the theme in relation to the research question.

The entire categorization process followed the principles of mutual exclusion, homogeneity, relevance, fidelity, and productivity. Finally, in the inference stage, we highlighted the main bioethical dilemmas that permeate family planning and discussed them in light of the four prima facie moral principles of bioethics: autonomy, justice, beneficence and non-maleficence [7].

Results

Of the seven selected articles, two were published in Portuguese and five in English. The

studies proved to be heterogeneous with respect to location, coming from countries considered more conservative (such as Iran) or more liberal (such as Canada). As for the methodological design, five studies were reflexive in nature and two exploratory (Table 1).

Table 1. Distribution of articles analyzed by author/year, country of origin and methodological design

Author, year	Country	Methodological design
Sanches, Simão-Silva; 2016 [12]	Brazil	Qualitative, reflexive in nature.
Mai, Ripke; 2017 [13]	Brazil	Qualitative, descriptive and exploratory.
Lin; 2011 [14]	Taiwan	Qualitative, reflexive in nature.
Aloosh, Saghai; 2016 [15]	Iran	Qualitative, descriptive and exploratory.
Guiahi; 2018 [16]	USA	Qualitative, reflexive in nature.
Serour; 2013 [17]	Egypt	Qualitative, reflexive in nature.
Tonkens; 2011 [18]	Canada	Qualitative, reflexive in nature.

Looking at the main results of the selected articles (Table 2), we observe that the studies point to the need for more bioethical discussions so that family planning becomes a hegemonic and viable possibility.

Table 2. Main results of selected studies

Author	Results
Sanches, Simão-Silva; 2016 [12]	"Family planning" is a multifaceted term that refers to a relevant tool for female empowerment due to the emergence of effective contraceptive methods. It is important to distinguish this technique from birth rate control policies, which aim to reduce the number of births for the benefit of a government. Religion also influences family planning due to possible conservative dogmas. New reproductive technologies have been changing the bioethical discussions on this topic.
Mai, Ripke; 2017 [13]	Technological advances in conception range from how fertilization takes place to the number and profile of individuals involved. Such advances make it possible to cure genetic diseases but bring the issue of eugenics back into the debate. It is necessary to broaden the discussions on the topic in academic, scientific, professional, and social circles.
Lin; 2011 [14]	Autonomy in reproductive decision-making has seen significant gains with the development of long-acting contraceptives, giving women more freedom. However, female empowerment still requires the promotion of education on family planning since autonomy must be strengthened by providing information.
Aloosh; Saghai, 2016 [15]	Family planning is extremely sensitive to public health policies since the social development of the population seems to be directly related to this practice. Health education is necessary to prevent the increase in rates of unwanted pregnancy, illegal abortion, sexually transmitted diseases, and poverty.
Guiahi; 2018 [16]	Religious health units can be a barrier to reproductive planning when they interfere with decision-making and oppose contraceptive use. Religious dogmas still permeate the structure of traditional marriage with a very patriarchal vision, for which the exercise of sexuality is not always free.
Serour; 2013 [17]	Women's autonomy within family planning must be respected after providing contextualized, evidence-based information. Thus, public policies must be rethought to provide health information free from external interference. However, conservative religions (such as Islam) can undermine family planning by preventing decision-making from being truly autonomous.
Tonkens; 2011 [18]	Prenatal genetic improvement seems to be a revolutionary tool in family planning, making it possible to cure genetic diseases still *in vitro*. However, these techniques must be discussed in light of bioethics, having parental guidance as its axis, especially in the face of the first wave of genetically altered humans.

From the initial categories extracted from the keywords and themes (Table 3), we elaborated guiding concepts and the following intermediate categories emerged: 1) "women as active subjects in reproductive choice"; 2) "sexual and reproductive independence"; 3) "public health policies"; (4) "consequences of the absence of effective public policies"; 5) "State oppression"; 6) "sociocultural and religious stigmas"; 7) "heredity control"; and 8) "eugenics."

Table 3. Initial and intermediate categories

Initial category	Guiding concept	Intermediate category
1. Women empowerment	Highlights the gains in female reproductive and sexual freedom after the discovery of effective contraceptives.	1. Women as active subjects in reproductive choice
2. Autonomy	Asserts the right to decide free from pressure and authoritarianism.	2. Sexual and reproductive independence
3. Free exercise of sexuality	Enables individuals to experience sexuality without risking an unwanted pregnancy.	
4. Reproductive decision-making	Right to reproductive decision based on contextualized information.	
5. Reproductive freedom	Emphasizes the right to freedom of reproductive choice.	
6. Health education	Points out the importance of sexual and reproductive education actions.	3. Public health policies
7. Reproductive planning	Asserts the right to plan (when, where and how) to have or not have children.	
8. Contraceptive methods	Defines methods (artificial or natural) that allow individuals to avoid conception.	
9. Social development	Reproductive planning enables economic and sociocultural advances.	
10. Unwanted pregnancy	Pregnancy in inadequate personal, sanitary, and social situations.	4. Consequences of the absence of effective public policies
11. Illegal abortion	Termination of pregnancy without the support of regulated health services.	
12. Disease transmission	Disease transmission due to unprotected sexual activity.	
13. Population control	Seeks to reduce the number of births by non-consensual means.	5. State oppression
14. Conservative principles	Defends the maintenance of the traditional family and women's traditional role.	6. Sociocultural and religious stigmas
15. Religious doctrines	Points to certain religions as a barrier to reproductive planning.	
16. Reproductive technologies	Scientific techniques that aid human reproduction.	7. Heredity control
17. Prevention of genetic diseases	*In vitro* gamete selection to prevent genetic diseases.	
18. Genetic improvement	Gamete selection based on the genes one wants to express.	8. Eugenics
19. Heal or create people	See human identity based solely on their genes.	

Research

These guiding concepts behind the initial and intermediate categories informed the final categories constructed: 1) "right to freedom and sexual/reproductive autonomy"; 2) "government interference in family and reproductive planning"; 3) "sociocultural and religious barriers to family planning"; and 4) "technological enhancement for pre-embryo handling" (Table 4).

Table 4. Final categories

Intermediate category	Guiding concept	Final category
1. Women as active subjects in reproductive choice	Points to contraceptive gains as tools for female sexual/reproductive freedom.	1. Right to sexual/reproductive freedom and autonomy
2. Sexual and reproductive independence	Emphasizes sexuality as a universal human right, which must be exercised without external pressures.	
3. Public health policies	Offer of government actions and programs geared towards reproductive planning.	2. Government interference in family and reproductive planning
4. Consequences of the absence of effective public policies	Shows the existing flaws in structuring public policies aimed at reproductive planning.	
5. State oppression	Possible control exercised by certain governments to prevent or encourage population growth.	
6. Sociocultural and religious stigmas	Influence of sociocultural and religious factors on sexuality and reproductive planning.	3. Sociocultural and religious barriers to family planning
7. Heredity control	Selection of gamete genes so the embryo formed follow certain patterns.	4. Improvement of technologies for pre-embryo handling
8. Eugenics	Search for human improvement based on hereditary characteristics to improve future generations.	

Discussion

"Family planning" refers not only to reproductive practice, but also encompasses constructing the family as a whole, with practices that seek to improve conditions for child birth, promote responsible adoptions, and prevent unwanted pregnancy. As part of the population's health care and an important tool for ensuring reproductive rights, family planning aims to secure full autonomy in choices regarding pregnancy or adoption, in more adequate personal, health and social situations [12,17].

Advances in family planning lead to reflections on what a family actually is, since the mere combination of genes and DNA is insufficient to define such a concept. Composed by individuals with or without genetic ties, family is the oldest social institution, and can have different forms and configurations.

Family planning, therefore, must collaborate to a more responsible construction of this institution, providing contextualized information and means for each couple or individual to make their choices, respecting the principles of autonomy, justice, beneficence, and non-maleficence [12,13]. Many dogmas previously linked to reproductive practice are becoming obsolete, generating new discussions and bioethical dilemmas have yet to be addressed.

Right to sexual/reproductive freedom and autonomy

One's need to express oneself sexually is rooted in the human condition itself, and the right to this expression should not have reproduction as its main assumption. Individuals must be autonomous and free to enjoy their sexual experiences, choosing when and how to engage in intimate

relationships. The concepts of sexual planning and reproductive planning must, therefore, be dissociated, since today's society already offers methods to healthily engage in sexual practices that does not necessarily imply reproduction [12].

An important advance in this regard was the emergence of contraceptives with ample efficacy and low cost, which provided women with more freedom and psychosocial well-being. By combining adequate health care and easy access to contraceptives, women had the means to choose how and when to have children, being able to continue their studies or pursue a career without worrying about an unplanned pregnancy. Contraceptives, therefore, respect the principle of autonomy, which defends the right to freely choose without interference from external pressures, as long as such choice is not harmful to others or to those involved [12,14].

Women's role within family planning cannot be that of a mere object; they must be active subjects and protagonists of their own sexual and reproductive history. To date, pregnancy is a human condition that only women can experience and, although completely natural from a biological standpoint, such an event poses physical, mental, and emotional health risks. Contraceptive methods, therefore, respect the principle of beneficence by collaborating with women's health and well-being, enabling greater control over sexual and reproductive experiences [12].

However, despite the numerous biopsychosocial advantages of contraceptive methods, religions and conservative societies end up censoring them, hurting the human right to sexual freedom. These religions and societies still consider reproduction as sex's only goal, putting barriers to a free and healthy sexuality [16,17]. Women are generally more vulnerable to this type of oppression, but their rights and autonomy of choice should never be transferred, renounced, or denied, regardless of circumstances.

Government interference in family and reproductive planning

Policies aimed at informing the population about reproductive planning are fundamental and should be seen as a public health issue. Family planning can improve the income and living standards of the population, providing greater economic and social well-being. Thus, governments must build solid access policies to quality educational programs, aimed at empowering people to make reproductive decisions [15].

On the other hand, the absence of or poorly elaborated public policies harm people's health, resulting in increased rates of unwanted pregnancy, illegal abortions, sexually transmitted diseases and infections and aggravating precarious economic conditions. Such context calls into question the principles of non-maleficence and justice, according to which one should not benefit some at the expense of harming others [15,17].

Such ambiguity between respect for autonomy and a possible socioeconomic benefit that family planning policies are often confused with the population control exercised by some governments. Reason why we must draw attention to the difference between family planning – a set of actions to regulate fertility that ensures equal rights to start, limit, or increase offspring by women, men, or couples – and birth control, which seeks to reduce the number of births through often non-consensual means. While it is understandable, depending on the context, for the State to seek to intervene in the population structure, there are ethical issues concerning the self-determination of each individual or couple that should not be overlooked [12].

Respect for autonomy is not limited to decision-making without coercion. Consent alone is insufficient for a choice to be considered free from external interference. Deliberation needs to be based on contextualized information, since population control policies are not the sole responsibility of individuals, but of society as a whole [14,15,17].

Sociocultural and religious barriers to family planning

Besides the State, religion – often opposed to artificial methods that prevent or hinder fertilization – exerts great influence on contraception practices. While some claim that religion is favorable to family building (valuing children even before conception), others see it as a barrier to reproductive planning, since it can interfere in decision-making and generate a bioethical dilemma regarding non-maleficence.

Religious dogmas commonly permeate the structure of traditional marriage with patriarchal

worldviews that prevent the free exercise of sexuality [12,16,17]. But religious interference in family planning becomes even more serious when church-based health institutions overlap internal norms and principles with due reproductive counseling. Every individual has the freedom and autonomy to decide whether or not to follow a religion and live according to its doctrines, but the right to information and health services accessibility cannot be denied to anyone [16].

More conservative societies, especially those that reduce women to a purely reproductive role, also tend to interfere in decision-making. Reducing women's bodies to a simple reproductive vessel can generate considerable impacts on their psychological and sexual health, especially those who suffer from infertility [16]. Radicalizing the idea that a woman's role is to reproduce, certain cultures, in an attempt to control women's sexuality, practice female genital mutilation, in a clear violation of human rights. In such cases, we should note that a society's own values must be respected, as long as they do not interfere with the health and well-being of its members [17].

Improvement of technologies for pre-embryo handling

Although an individual's religion and culture continue to influence their acceptance or refusal of family planning, we must stress the impact of the great scientific advances of the last decades. Contemporary biotechnology allows for different interventions and approaches to conception, ranging from how fertilization takes place to the number and profile of the individuals involved [13,18].

Current reproductive technology can cure genetic diseases by manipulating genes and selecting gametes *in vitro*, bringing benefits to individuals yet to be generated. As technological advances move faster than bioethical discussions, however, practical and theoretical dilemmas arise. Even if pre-embryo handling techniques present advantages for public and individual health, we should not underestimate the historical and ideological limits that prevent us from socializing these benefits [13,18].

Advances in human reproduction thrill the scientific community, offering advantages that can benefit many people. These advances, however, also raise complex reflections and major concerns. If, on the one hand, human intervention in an act previously considered as natural advances gene therapies, on the other, it creates situations that can bring eugenics back into the debate [13].

Our characteristics and particularities should not be defined only by our genetic profile, for they transcend social, cultural, and ideological barriers. Even if a genetically perfect human being is created, the concept of health, as we know today, goes beyond the absence of disease to also encompass the interaction between individuals and everyday attitudes and habits. We are too complex to be limited and judged only by our DNA [12,13,18].

Finally, it is worth noting that technological advances in human reproduction may not be accessible to all due to their high cost, thus harming the principle of justice [13]. With new contraceptive methods and new reproductive technologies, bioethical discussions on family planning (which once revolved around "when" and "how" to have or not have children) are now reflecting on what "type" of children we want to have [12,13,18].

Final considerations

The bioethical dilemmas we see emerge from family planning concern the right to freedom and sexual/reproductive autonomy (especially of women), government interference in family and reproductive planning, the sociocultural and religious barriers to family planning, and technological advances for pre-embryo handling. More in-depth discussions regarding these dilemmas are needed to prevent setbacks in the field of health and reproductive rights.

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Authors' contribution

All authors participated in the study planning. Laura Xavier de Moraes contributed at all stages. Carla Andreia Alves de Andrade and Fernanda da Mata Vasconcelos Silva participated in data collection and manuscript writing. Aurélio Molina da Costa, Fátima Maria da Silva Abrão and Francisco Stélio de Sousa advised the study and reviewed the final version of the manuscript.

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Research