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Eugenics and Healthcare

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Abstract

Introduction and Definition: Eugenics is the belief that the human species can be "improved" through selective reproduction, derived by Francis Galton in 1883. This paper presents a critique of eugenics as a practice in Canada, and how it has evolved over time to represent an autonomous approach in current reproductive healthcare. This historical progression is examined by outlining policies and comparing practices in eugenics that have shifted how current reproductive healthcare is conducted.

Origins of Eugenics: During the 1930s, physicians adopted eugenics and called for the sterilization of those considered "defective” including the lower class, immigrants, ethnic minorities including Indigenous groups, LGBTQ+, criminals, and those with disabilities. Eugenicists argued that controlling heredity was essential to eliminate the unfavourable traits. It is important to note that desirable and undesirable traits varied by country. The country’s eugenic policies depended on which traits were considered undesirable and desirable and ultimately led to sterilization.

Policies and Practices in Canada: In Canada, government intervention focused on shaping the genetic makeup of society through laws and policies granting the state control over procreation. Alberta was the first province in Canada to introduce the Alberta Sexual Sterilization Act in 1928. According to the Act, sterilization would prevent "the risk of passing “mental defects” to future children and was often used for individuals who were institutionalized for mental health issues.

Modern Eugenics in Healthcare: Current research in genetics focuses on the use of reproductive technologies to guide reproduction decisions by prioritizing individual choice and informed consent using genetic screening and counseling. For example, prenatal screening detects genetic defects and improves parental reassurance and pregnancy management. However, challenges remain regarding the implications of identifying and addressing genetic abnormalities prenatally.

Implications of Eugenics in Healthcare and Future Directions: In healthcare, initiatives such as sterilization or selective termination were used to reduce future health burdens. Modern geneticists sought to differentiate their work from the eugenics movement by prioritizing reproductive autonomy in their practice. As a result, the emphasis on bioethical principles such as autonomy and justice in medicine have introduced the role of genetic counselling in perinatal care.

Keywords: eugenics; reproductive technologies; genetic counselling; heredity; genetics

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Introduction and Definition

Eugenics, derived from the Greek words meaning "good birth," was introduced by Francis Galton in 1883. He described eugenics as “using insights from the new science of heredity to improve the welfare of future people” [1]. Galton argued that by encouraging the reproduction of individuals with "superior" traits and discouraging those with "inferior" traits, it would be possible to foster a healthier, more intelligent population [1]. The Western eugenics movement favoured the white Anglo-Saxons as superior, while the “feebleminded” such as those with disabilities or lower socio-economic status, were considered inferior [1]. A common view among eugenicists was that low socioeconomic classes were poor not because of circumstance or environment but because of intelligence deficits and because they had too many children, leading to financial burdens. Thus, Galton believed that by understanding and applying principles of heredity and selective breeding, society could enhance the overall quality of the human species by reducing such deficits [1].

Eugenics gained criticism from the public and healthcare scholars due to its controversial methods and ethical implications [2]. The application of eugenic principles often involved coercive and discriminatory practices, such as forced sterilizations, and marriage restrictions that targeted marginalized groups [3]. These practices were justified by the belief that they would lead to the improvement of societies by eliminating the “defective”, but they frequently resulted in significant human rights abuses [3].

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In healthcare, the idea of improving the genetic quality of the population raised ethical questions about autonomy, consent, and the potential for abuse. Modern healthcare professionals argue that eugenic practices undermine the dignity and rights of individuals by reducing them to their genetic traits and failing to consider the social and environmental factors that make up an individual. These factors may include their socioeconomic status, and the environmental conditions they were raised in, which may contribute to their mental well-being, upbringing and access to resources such as healthcare and education [4]. Moreover, the history of eugenics is associated with racist and ableist ideologies, which have led to widespread harm and discrimination [5]. Understanding eugenics involves grappling with its complex legacy, and it is crucial to approach with an ethical framework that prioritizes individual rights and social justice.

Body

Origins of Eugenics

Galton's eugenics was influenced by Darwin's theory of Natural Selection, where Darwin suggested that human evolution would advance when people recognized they were not entirely driven by reproductive instinct. Instead, humans could shape their own future evolution through selective reproduction [6]. Francis Galton's essay "Hereditary Talent and Character" represents his thoughts on heredity, offering insights into his belief in the potential to control human traits by preserving favourable traits and destroying harmful traits. Galton draws a parallel between breeding practices in animals and the potential for similar control over human qualities, suggesting that physical and mental traits could be molded by selective breeding. In his essay, he writes, "The power of man over animal life, in producing whatever varieties of form he pleases, is enormously great...It would seem as though the physical structure of future generations was almost as plastic as clay, under the control of the breeder's will [6]." His two main arguments rested on the idea that mental traits are inherited just like physical ones, and that human heredity operates in the same way as in animals. By comparing humans to domesticated animals, he believed that behavioral characteristics could be selectively enhanced [7]. Through this work, Galton laid foundational ideas for the later development of eugenics, which would gain both scientific and social traction in his time [7].

As a result of his findings, eugenics societies formed in North America, including the Alberta Eugenics board, granting these organizations intellectual credibility and popularizing eugenics as a response to challenges such as urbanization, epidemics, poverty, and immigration [5]. These societies were in favour of eliminating those that presented as threats to society by reproducing. Canadian historians centered their studies of eugenics surrounding sexual sterilization of Indigenous women and those who were institutionalized for "mental health defects" [5]. For example, Helen MacMurchy, a Canadian doctor and eugenicist believed that the "feeble-minded" were considered a significant economic burden [8]. She argued that Ontarians faced substantial financial costs by allowing individuals with intellectual disabilities to remain in the community since it would cost taxpayers hundreds of dollars annually in treatments offered through public health services [8]. MacMurchy and other eugenicists aimed to restrict the autonomy, rights, and freedoms of individuals labeled as mentally "unfit." They sought to garner public and governmental support for new regulations that would grant healthcare professionals the authority to intervene in and regulate the lives of marginalized groups through sterilization [8].

Policies and Practices in Canada

At the start of the 20th century, infant mortality rates were extremely high, raising concerns about preserving the superior Anglo-Saxon race. Eugenics focused on eliminating groups deemed inferior and on promoting the growth of the superior race to ensure it remained the majority of the Canadian population [9]. Between 1901 and 1928, Alberta's population grew rapidly, increasing eightfold from 73,022 in 1901 to 607,599 by 1926. By then, immigrants comprised over 42% of the population, unsettling the province's Anglo-Saxon Protestant majority [9]. This demographic shift fueled anxiety about social change. In response, the social reform movement, influenced by concerns over "social purity," gained momentum [9]. Upper- and middle-class reformers advocated for targeting mental deficiency through child inspections, maternity care, venereal disease prevention, and mandatory health certificates for marriage. The Canadian National Committee for Mental Hygiene (CNCMH) emerged in 1918 within this movement, promoting eugenic policies as a means of maintaining social order [9]. The CNCMH's public health movement assessed mental health problems and their socio-political impacts, reinforcing class and ethnic discrimination [9]. These surveys showed a link between economic burdens and institutionalization of the feebleminded. Specifically, the surveys indicated that a significant amount of expenses were required to provide healthcare and housing resources for the feebleminded [9]. This resulted in forced or coerced sterilization – sterilization without free and informed consent, which enabled government control over reproductive rights [10]. In 1928, Alberta's Sexual Sterilization Act disproportionately targeted Indigenous women. During this period, 77% of sterilized Indigenous women in Alberta were labeled as sexually promiscuous or mentally defective through biased IQ tests. Although public support for sterilization policies ended in 1972–1973, they were not outlawed. Between 1970 and 1975, 1,200 Indigenous women were sterilized in Canada, causing the Indigenous birth rate to drop from 47 per 1,000 in the 1960s to 28 per 1,000 in 1980 [9]. These sterilizations were justified as protecting "unfit" Indigenous women and families from the burdens of larger families, but they were a means of population control and a way to reduce public health costs [10].

Modern Eugenics in Healthcare

Current healthcare focuses on using genetic and reproductive technologies to enhance individual traits, emphasizing personal choice and consent using methods such as genetic screening and counselling provided by healthcare professionals [11]. In the 20th century, biological eugenics emerged as a form of new eugenics, advocating for eliminating undesirable traits to improve human populations. Biological eugenics is considered in two different branches: negative eugenics and positive eugenics. Negative eugenics aims to prevent the birth of individuals with undesirable genetic traits, such as disability-selective abortion. Conversely, positive eugenics involves actively selecting desirable genetic traits, such as using assisted reproductive technology (ART) to choose an embryo without a defective gene present in the parents [11].

Genetic counselling is considered a common form of biological eugenics and includes different stages: preconception, preimplantation, and prenatal [11]. Genetic counseling plays a crucial role in modern healthcare by providing expectant parents with valuable information about genetic risks and fetal health. It allows parents to make informed decisions regarding their pregnancies, weighing potential risks and benefits [12]. Since the introduction of prenatal genetic testing, concerns have persisted about whether all patients receive adequate information to make informed decisions. Current practice guidelines recommend offering all women a range of genetic tests, including carrier screening, and diagnostic testing. As testing options have expanded, the challenges in patient education, counseling, and access to genetic testing resources have also arisen [12].

In preconception, a couple or their family members may have a risk of inherited disorders or a genetic predisposition toward a disease. In such cases, they may be referred by a healthcare provider to seek counseling on their concerns about the risk of having children with inheritable diseases [11]. In this context, parents have two decisions to make. If the likelihood of the child inheriting a genetic disease is low, they may choose to proceed with reproduction. However, if there is a heightened risk of a genetic disorder, the mother may decide whether to have children. If she chooses not to, the couple may use family planning methods such as vasectomy, hormonal methods, or opt for adoption. If they decide to proceed with pregnancy, they could choose between using ARTs or accepting the inherent risks and potential outcomes of taking no special precautions [11].

Secondly, in preimplantation, a couple seeks counseling after deciding to have a child using ARTs. When patients opt for ARTs, they may make a personal decision based on their specific circumstances and genetic counseling results. They may choose to use an embryo, either their own or a donated one, selected for the absence of undesirable characteristics [12].

Lastly, prenatal genetic counseling, a standard part of prenatal care, informs parents if a fetus has genetic diseases or major congenital defects. It assesses parental genetic risk by explaining disease severity, treatment options, and the differences between screening and diagnostic tests. If a genetic or congenital disorder is detected, parents may face the decision to continue or terminate the pregnancy [11]. However, the ethical implications of these decisions highlight ongoing debates about reproductive autonomy and societal attitudes toward disability and genetic diversity. Balancing medical advancements with ethical considerations remains a complex challenge as prenatal genetic technologies continue to evolve [11].

Implications of Eugenics in Healthcare and Future Directions

Originally focused on societal improvement through genetics, modern eugenics emphasizes individual desires for specific offspring traits, marking a shift towards personal reproductive autonomy and familial well-being. Reproductive technologies—such as contraception, prenatal screening, and in vitro fertilization—are widely seen as enhancing parental autonomy and promoting health. However, disability bioethics critiques this view as overlooking the eugenic implications of these practices [13]. For individuals with traits targeted for prevention, such as Down syndrome, spina bifida, and blindness, the idea that these technologies contribute to human improvement is considered problematic by disability scholars. Disability bioethics highlights a complacency in endorsing reproductive choice without acknowledging its potential for exclusion [13]. A key critique is that prenatal screening followed by selective abortion conveys a negative message about the value of lives with these traits. Along with the shift in attitudes toward eugenics, there are still some concerns regarding preimplantation genetic diagnosis (PGD) in modern healthcare. For example, prenatal screening for Down syndrome raises ethical concerns about modern eugenics, particularly in how reproductive choices are influenced [13]. While screening provides information about the presence of a genetic condition, it does not determine the severity of impairments, leading to uncertainty in decision-making. The high termination rates following a Down syndrome diagnosis suggest that prenatal testing may reinforce societal biases against disability, subtly shaping reproductive decisions [13]. However, screening can also serve a positive role, allowing parents to prepare for potential challenges rather than eliminating certain conditions outright. The concept of "choice" in prenatal screening is complex, as it is shaped by societal expectations, availability of support, and implicit messages about which lives are valued [13]. Though modern eugenics does not involve coercion, the widespread use of screening technologies may create pressure to select against disabilities, raising ethical questions about reproductive autonomy and the diversity of the human population [13]. Balancing medical advancements with ethical considerations requires ensuring that screening is presented as a tool for informed decision-making rather than a means of devaluing certain lives. The goal of prenatal testing should be to inform rather than eliminate, preserving reproductive autonomy while promoting an inclusive society that values all lives [14].

Additionally, in Canada, PGD is currently not publicly funded, though some provinces such as Ontario offer financial support or tax deductions for in-vitro fertilization tests [15]. Reproductive genetic testing guidelines require the condition to be severe enough to justify testing, yet they lack clear risk thresholds. This ambiguity creates ethical concerns regarding access and equity, potentially leading to inconsistencies in who is offered PGD. From a modern eugenics' perspective, such disparities raise questions about who determines which conditions are "severe enough" and whether selective screening reinforces societal biases about genetic desirability [15]. The lack of standardized criteria risks enabling reproductive choices that are shaped more by economic and regulatory constraints than by medical necessity or ethical considerations [15].

To improve ethical healthcare practices and prevent eugenic biases, the Society of Obstetricians and Gynaecologists have published a clinical guideline stating that all pregnant individuals in Canada should have equal access to prenatal screening for fetal anomalies, guided by informed counseling and shared decision-making [16]. Healthcare providers must be aware of available screening options, and a standardized system should ensure timely, reliable results. Ethical screening programs require oversight, audited laboratory and ultrasound services, genetic counseling, and education for patients and providers [16]. These programs must also adapt to new technologies with proper funding. Before screening, patients should be fully informed of risks, benefits, and alternatives, ensuring autonomous decision-making [16]. Clear guidelines on screening options, including DNA testing, and invasive diagnostics, help prevent financial and regulatory barriers from influencing reproductive choices, reducing the risk of selective reproduction based on socioeconomic privilege [16]. These guidelines indicate the importance of autonomy and informed consent in the process of PGD, to prevent harm.

While historical eugenics restricted reproductive rights, today's practices empower parents with significant control over genetic outcomes through counselling, informed consent and shared decision making by professional healthcare providers [12]. However, navigating this evolving landscape requires careful consideration to ensure that modern eugenics respects reproductive rights while avoiding ethical pitfalls. It is crucial to uphold principles that safeguard human dignity, autonomy, and fairness, promoting responsible use of genetic technologies that celebrate diversity and prevent discrimination [9]. In sum, the future of eugenics calls for balancing scientific advancements with ethical considerations. This approach fosters a societal framework where reproductive decisions are guided by justice and respect for fundamental human rights [9].

List of Abbreviations

ARTs: assisted reproductive technologies
CNCMH: Canadian national committee for mental hygiene
PGD: preimplantation genetic diagnosis

Conflicts of Interest

The author declares that they have no conflict of interests.

Authors' Contributions

AAS: made contributions to gathering information to be used in the article, drafted the manuscript, edited the final version of manuscript, and ensured all sources are cited.

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