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Avant-propos

Selam OGBALIDET Rédactrice en chef

Chère lectrice, cher lecteur,

Au nom de la RISS comité éditorial 2013-2014, je suis heureuse de vous présenter le second numéro du 3e volume de la Revue Interdisciplinaire des Sciences de la Santé (RISS).

En accord avec le principe de collaboration interdisciplinaire, notre équipe s'est efforcée de fournir une représentation multidimensionnelle des déterminants de la santé en recrutant des collaborateurs des différentes facultés qui composent l'Université d'Ottawa. De plus, chaque résumé d'article dans ce numéro est traduit, dans le souci de préserver la tradition bilingue de la revue. Bien que la RISS ait évolué au fil des ans en ce qui concerne sa structure et sa gestion, notre engagement envers notre lectorat ne s'est jamais affaibli. Chers lecteurs, votre soutien continu a, à son tour, renforcé notre détermination et notre capacité à faire du bon travail d'édition.

Le comité éditorial de la RISS a été comblé de pouvoir compter sur le soutien d'un ensemble sans cesse croissant d'experts dévoués. Sans ces membres, la plupart affiliés à l'Université d'Ottawa et à d'autres organismes professionnels, nous ne serions pas en mesure de présenter des recherches étudiantes de qualité. Notre équipe est aussi redevable à Mirhad Lončar, le traducteur officiel de ce numéro, dont l'aide a été partie intégrante de la capacité de la revue pour mettre en valeur la recherche qui est le reflet de l'enseignement bilingue. Au professeur Raywat Deonandan qui supervise cette initiative dirigée par les étudiants, nous adressons nos plus vifs remerciements ainsi que notre sincère gratitude. Sans ses conseils, la RISS n'aurait pas mérité les éloges qu'elle a reçus depuis sa création en 2009. Enfin, le travail du comité éditorial, de ses éditeurs et éditrices seniors et associés, ne peut pas être surestimé. Leur enthousiasme pour le travail que nous faisons m'a laissé en admiration devant eux et, plus important encore, m'a assurée que leur dévouement ne doit pas être remis en question.

Mon temps avec la RISS a été une expérience remplie de défis mais bien enrichissante professionnellement. Au cours de mon mandat de deux ans, j'ai constaté comment les étudiants ont pu bénéficier, à la fois personnellement et professionnellement, de voir leur travail publié; j'ai eu le privilège de faire partie de leurs réalisations. Alors que mon équipe et moi avons tiré grand plaisir du processus de publication, les œuvres originales trouvées dans ces pages nous ont vraiment invités à savourer les délices de la recherche. En terminant, je souhaite que ce numéro fasse naître en vous un regain d'intérêt pour entreprendre un projet de recherche original de votre choix.

Cordialement,

Selam Ogbalidet, BHSc

Rédactrice en chef (2011-2013)

Foreword

Selam OGBALIDET Editor-in-Chief

Dear Reader,

On behalf of the 2013-2014 IJHS editorial board, I am happy to present to you the Volume 3 Issue 2 of the Interdisciplinary Journal of Health Sciences (IJHS).

In keeping with the true essence of interdisciplinary collaboration, our team has endeavoured to provide a multi-dimensional representation of the determinants of health by recruiting contributors from the different faculties that comprise the University of Ottawa. Furthermore, every abstract that appears in this issue is accompanied by a translated counterpart in an effort to preserve the journal's bilingual tradition. Although the IJHS has evolved over the years with respect to its structure and management, our commitment to our readership has never wavered. The continued support of our readership has, in turn, strengthened our resolve to continue to improve upon the work that we do.

The IJHS editorial board has been very fortunate to receive the support of a dedicated, and ever growing, peer review committee. Without its members, who are affiliated with the University of Ottawa and other professional bodies, we would not be able to make quality student research accessible to our readership. Our team is also indebted to Mirhad Lončar, the official translator for this issue, whose assistance has been integral to the journal's ability to showcase research that is reflective of bilingual education. To Raywat Deonandan, PhD, the supervising professor for this student-led initiative, we extend our warmest thanks along with our sincere gratitude. For without his guidance, the IJHS would not have achieved nor deserved the praise that it has enjoyed since its inception in 2009. Lastly, the contributions of the senior editorial committee as well as those of the associate editors cannot be overemphasized. Their excitement for the work that we do has left me in awe of them and, more importantly, has assured me that their dedication is not to be questioned.

My time with the IJHS has been a challenging yet richly rewarding experience. Over the course of my two-year term, I have seen how students have directly benefited, both personally and professionally, from having their work published and I have been privileged to be a part of their accomplishments. While my team and I have derived great pleasure from the publication process, the original works found within these pages have truly invited us to enjoy the delights of research. In closing, it is my hope that this issue will awaken in you a renewed interest to undertake an original research project of your own.

Sincerely,

Selam Ogbalidet, BHSc

Editor-in-Chief (2011-2013)

Sub-Saharan Women Affected by HIV/AIDS: The Perfect Storm of Risk Factors

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Résumé :

(traduction)

Cet article examine la santé des femmes dans le cadre de la prévalence et de l'incidence du VIH/SIDA en Afrique sub-saharienne. Les facteurs de risque que la littérature académique suppose comme étant a l'origine de l'augmentation des taux de VIH/SIDA chez les femmes d'Afrique sub-saharienne sont identifiés. Parmi les facteurs de risque abordés, figurent les facteurs biologiques, les parasites, la malnutrition, un faible statut socio-économique, la violence conjugale, la guerre, l'inégalité entre les sexes et le manque d'éducation. Ces facteurs de risque sont liés à plusieurs déterminants de la santé, y compris le niveau de revenu et le statut social, l'éducation et l'alphabétisme, l'emploi, l'environnement physique, le sexe et la culture. Les auteurs présentent leurs points de vue concernant l'endiguement de l'épidémie du VIH/SIDA, pensant surtout à réduire les effets de la pauvreté chez les femmes d'Afrique sub-saharienne.

Mots-clés : VIH/SIDA, Afrique sub-saharienne, femmes, facteurs de risque, sexe, genre

Abstract:

This paper explores women's health in the prevalence and incidence rates of HIV/AIDS in sub-Saharan Africa. The risk factors presented in the literature that are hypothesized to be responsible for the increasing rates of HIV/AIDS in sub-Saharan African women are identified. Risk factors discussed include biological factors, parasites, malnutrition, lower socioeconomic status, intimate partner violence, war, gender inequality and lack of education. These risk factors relate to multiple determinants of health: income and social status, education and literacy, employment, physical environment, gender and culture. The authors present their perspectives on mediating this epidemic, which involves reducing the ramifications of poverty on sub-Saharan women.

Keywords: HIV/AIDS, Sub-Saharan Africa, women, risk factors, gender.

Introduction

Gender inequality has plagued women since the beginning of civilization. Women have fought to be seen as equal counterparts to men in all aspects of life. Looking throughout history one can see that the status of women has greatly improved. However throughout the world women encounter various health inequities that put them at a higher risk for disease.

A woman's health has an effect on the family unit, the development of a country, and the development of the world. Firstly, a child's risk of death increases significantly if his or her mother is deceased. This trend is more pronounced for female children; thus, maternal death perpetuates health inequalities for future female generations. Secondly, a family's finances are negatively affected by an illness of the woman in the household because paid work productivity suffers when a person is faced with poor health. A woman's contribution to non-paid activities such as food preparation and water collection may also deteriorate. Episodes of psychological distress, such as depression, are more commonly experienced by other family members when the maternal figure is ill (Gill, Pande & Malhotra, 2007). The health of women also affects national economies. When women are healthy and educated, they are able to enter the workforce and contribute to the family income. Contributing to the family income gives women more bargaining power in the family, and women, compared to men, are more likely to spend their money on the needs of their children (Morrison, Raju & Sinha, 2007). Children of healthy and educated mothers are in turn healthier and more educated themselves. The future generation of children are then more productive and contribute more to society, which increases a nation's economic well-being (Morrison et al., 2007). The US Agency for International Development (USAID) estimated that the monetary cost of global maternal mortality is over US$15 billion due to lost potential productivity (Gill et al., 2007). Thus, the importance of female health cannot be overlooked.

In sub-Saharan Africa, women suffer disproportionately compared to their male counterparts with respect to HIV/AIDS. For example, women are faced with detrimental health inequities that put them at an increased risk for contracting the disease. Around the world, nearly 50% of the 40 million people living with HIV/AIDS are women. This is a sizeable increase from 1985 when only 35% of HIV positive people were women (Rodrigo & Rajapakse, 2010). Sub-Saharan Africa is home to 67% of people living with AIDS worldwide, and 72% of global AIDS-related deaths take place there (Magadi & Desta, 2011). In 2010, there were 20,100,000 adults over the age of 15 living with HIV in sub-Saharan Africa; 59% of these adults were females (World Health Organization, 2011; UNAIDS, 2011; UNICEF, 2011). In this paper the reasons reported in the scientific literature supporting this epidemiological trend will be explored. Risk factors identified involved six of the determinants of health: income and social status, education and literacy, employment, physical environment, gender and culture. Last, the author's point of view, which is that a multi-solution approach to combating the effects of poverty should be adopted, will be presented.

Materials and Methods

A literature review was performed using the database "Scholars Portal Journals." Keywords used for the search were "women," OR "female" OR "mother" AND "HIV" OR "AIDS," AND "sub-Saharan Africa." This search was limited to articles published after 2005 and resulted in 102 articles. Inclusion criteria applied required that that the articles were peer-reviewed research articles, the population of study was women living in Sub-Saharan Africa (and not just of sub-Saharan origin), and the language of publication was English. Studies using both quantitative and qualitative data were included. 35 articles were found to fit the inclusion criteria; 21 articles were finally selected based on relevance, validity of study and overlap of findings.

Results

Biological

Women are more biologically vulnerable to contracting HIV during heterosexual intercourse than men; it is estimated that male to female transmission of the virus is two to three times more efficient than female to male transmission (Heimer, 2007). Possible explanations for this intrinsic susceptibility are that females have a larger area of exposed mucous membrane, male sexual fluids have a higher viral load, and more fluid is passed from a male to a female rather than vice versa (Campbell, Baty, Ghandour, Stockman, Francisco & Wagman, 2008). Gynaecological infections and precancerous lesions that can develop in the vagina and cervix also increase this inherent vulnerability (Rodrigo & Rajapakse, 2010). In addition, pregnancy puts women at an increased risk for HIV because of the increased need for health interventions such as medication delivered via injection and blood transfusions (Himmelgreen, Romero-Daza, Turkon, Watson, Okello-Uma & Sellen, 2009).

Genital Lesions/Parasites

The presence of genital lesions and parasites commonly found in sub-Saharan Africa make a woman more vulnerable to contracting HIV. Genital lesions, which can be caused by gynaecological issues such as genital schistosomiasis and STIs can facilitate viral transmission. Genital lesions make a woman three times more susceptible to contracting HIV during one sexual encounter. The lesions cause inflammation, which brings the immune cells targeted by the HIV virus to the genital area, thus facilitating viral entry into these cells (Stillwaggon, 2008). Genital schistosomiasis, an infection caused by a parasite, is quite prevalent in sub- Saharan Africa. In a region in Tanzania, 63% of the population was infected with schistosomiasis at the time of study, and 37% of females over 15 had schistosomiasis in the lower reproductive tract (Mabala, 2006). In addition to causing genital lesions, schistosomiasis damages the intestines, bladder, and other organs. This damage can cause anemia and protein-energy deficiency, which both lower immune functioning. Females come into contact with the schistosomiasiscausing parasite while performing water-related household tasks such as washing clothing, collecting drinking water, and collecting aquatic vegetation for nutritional or building purposes. The parasites enter through the skin and travel throughout the body. Other intestinal parasites such as hookworms, roundworms and amoebas can increase the risk of HIV by causing malnutrition related to intestinal blood loss and chronic diarrhoea. Parasites can also directly lower immune function as a consequence of the immune system being deteriorated from trying to combat the parasites (Stillwaggon, 2008). Malaria is associated with an increase in HIV viral load. Areas with high presence of the malaria-causing parasite also have increased HIV rates (Stillwaggon,2008; Cuadros et al., 2011).

Malnutrition

Poor nutrition increases susceptibility to HIV by lowering immune function. From 1970 to 1999, 21 famines occurred worldwide and 19 of those occurred in sub-Saharan Africa. Females are especially susceptible to food shortages because of lack of access to land, education, and health services (Sacks & Levi, 2010). Deficiencies in macronutrients such as protein and micronutrients including iron and zinc lower the efficiency of the immune system. Iron, zinc, and vitamin A specifically affect the protective barrier of the skin and the production of B cells, T cells, and natural killer cells (Stillwaggon, 2008). Malnutrition not only makes a woman herself more susceptible to infection, but vertical transmission from mother to child has also been found to be higher in women with lower CD4 cell counts, a condition associated with malnutrition (Himmelgreen et al., 2009). Vitamin A deficiency has also been associated with increased maternal transmission (Stillwaggon, 2008). Anemia, which can be caused by deficiencies in iron, increases the amount of virus particles released in a woman's birth canal, thus acting as another factor that increases maternal transmission. Food insecurity also results in behavioural changes that increase a woman's risk of HIV. A study from Botswana and Swaziland found that women with food insecurity were more likely to engage in transactional sex and use condoms inconsistently (Himmelgreen et al., 2009). Two studies from Malawi also found that food insecurity results in unsafe sexual practises (Himmelgreen et al., 2009).

Low Socioeconomic Status

Lower socioeconomic status is associated with a higher risk of HIV in women. Firstly, women with lower socioeconomic status have riskier sexual behaviours. For example, a South African study found that living in a low income household was associated with earlier loss of virginity, greater chance that the first encounter was forced, higher rates of future episodes of forced sex, and increased rates of transactional sex. Impoverished girls cannot afford safe transport to and from school, live in dangerous neighbourhoods, and attend lower quality schools. These factors put impoverished schoolgirls at a higher risk for violence, including sexual violence, which subsequently increases their risk for HIV. The likelihood of a woman performing transactional sex also increases as socioeconomic status lowers (Hallman, 2005). Conversely, some studies found a correlation between wealth and increased HIV rates (Magadi & Desta, 2011). This association has been linked to the wealthy having more reckless lifestyles, more sexual partners, higher levels of drug use, and more purchasing of sexual intercourse (Magadi & Desta, 2011; Rodrigo & Rajapakse, 2010). Although this contradicts the association between poverty and HIV, wealth is correlated with an increase in HIV rates for both sexes while poverty disproportionately increases the risk for women.

Intimate Partner Violence

Studies conducted in sub-Saharan Africa reveal that there is a greater association between HIV-positive women and lifetime partner violence than HIV-negative women and lifetime partner violence (Campbell et al., 2008). Several reasons explain this association. Firstly, out of all relationships that are violent, 40-45% also include forced sex. Forced sexual intercourse can cause vaginal or rectal lacerations that increase the likelihood of HIV transmission (Campbell et al., 2008). Rape increases a woman's risk of HIV infection by 30% (Mabala, 2006). Also, women may fear that if they request the use of condoms or refuse sex their partners will react violently. Therefore levels of safe sexual activity are diminished in violent male-female relationships (Feldacker et al., 2011). Another possible explanation is that abused women have decreased immune functioning as a result of stress, depression, and chronic anxiety caused by the abuse. Although research on abused African women is lacking, studies in the United States have found an association between intimate partner violence and both decreased T-cell function and altered levels of the hormones cortisol and dehydroepiandrosterone. These changes may be behind the mechanism causing the association between decreased immune functioning and intimate partner violence (Campbell et al., 2008). It was also found that sub-Saharan men who have multiple sexual partners are twice as likely to display intimate partner violence. Furthermore, in Tanzanian men who acted violently towards their partners were 1.8 times more likely to have had premarital and extra-marital sexual encounters, which increases the risk of HIV transmission (Campbell et al., 2008).

Conflict/War

An association that surfaced in the 1980s found that the presence of war puts women at an increased risk of HIV infection. The predominant mediating factor between war and increased HIV rates in women is rape. During the 1994 genocide in Rwanda, it is estimated that between 200,000 and 500,000 rapes occurred. In a study performed five years post-conflict, UNICEF found that, of a sample of 2000 women who were raped during that time, 80% were HIV positive. It should be noted, however, that other studies, such as that of Spiegel et al., found the relationship between rape and HIV during the conflict in Rwanda to be positive but much more conservative than the relationship estimated by others. Speigal et al. reported a 5% increase in HIV prevalence among women who were raped during the conflict versus those who were not (as cited in McInnes, 2009). War also causes displacement of populations. This can result in intermingling of high prevalence populations with low prevalence populations, thus expanding the epidemic (Rodrigo & Rajapakse, 2010).

Gender Inequality

Gender inequality in male-female relationships and the generally patriarchal society in sub-Saharan Africa put women at an increased risk for contracting HIV/AIDS. Countries rating high on the Gender Equality Index, such as Mauritius, were found to have lower HIV prevalence, while countries rating low on the Gender Equality Index, such as Mozambique and Zambia, were found to have higher HIV prevalence rates (Stockemer & Lamontagne, 2007). In sub-Saharan Africa, women often receive less education than men, which puts them at a disadvantage occupationally and economically. This culture of patriarchy puts women in a position of vulnerability when it comes to safe sex. Women who are reliant on their husbands or other men financially may not feel that they have the right or courage to speak out regarding the use of condoms or the refusal of sex. For example, a woman may feel that if she insists on the use of condoms her husband may leave her. In addition, it is traditional for a husband to provide a sum of money to the wife's family. This financial interaction may cause men to feel that they are entitled to do what they want regarding sexual intercourse. Requesting the use of condoms use may anger the male because he may feel that the woman suspects he is being unfaithful or that he is somehow "dirty" (Adamczyk & Greif, 2011).

Education

In sub-Saharan Africa higher education is associated with safer sexual behaviours, such as later age of first sexual encounter, lower number of sexual partners, fewer casual sexual relationships, and increased condom use. Educationworks by increasing knowledge. In 1999, HIV/AIDS education was introduced at the primary school level (Adamczyk & Greif, 2011). Many women who are currently sexually active would have not been taught this in school but education increases their access to the media, increases their ability to read, and makes them more likely to belong to community organizations. All of these factors increase a woman's exposure to HIV/AIDS information. Education can enhance a woman's self-esteem thereby making her less likely to enter or stay in a relationship characterized by inequality, which would put her at higher risk for HIV.

Furthermore, it is traditional for women to "marry up," meaning they marry a husband with a higher status, education, and income level than themselves. This fact means that an educated woman would marry a more educated man, who himself would be more inclined to practise safe sex. A more educated woman would presumably have fewer financial problems; therefore, she would have less need to perform paid sexual acts (Adamczyk & Greif, 2011).

Discussion

Himmelgreen et al., referred to the situation described above as the, "perfect storm for the making of an epidemic" (Himmelgreen et al., 2009, p.403). Impoverished conditions create a web of interconnected risk factors. Poverty puts women in situations of malnutrition, which lowers immune functioning. A lack of clean water leads to contact with parasites like schistosomiasis (Himmelgreen et al., 2009). In addition to lowering immune functioning, long-term food insufficiency can increase gender inequality by increasing a woman's dependence on men for resources (Greif, 2012). Therefore, trying to increase the status of women without first increasing food security would be counterproductive. In addition, many qualitative findings suggest that women turn to transactional sex in order to feed their children and themselves (Heimer, 2007). Sexual practices will not be easy to change in the face of poverty. Both sexual practices and the status of women are preserved and exacerbated by poverty.

In order to see progress, small steps toward improving the living conditions for women are needed in addition to medical treatments. A single solution will not be sufficient to fully manage this epidemic. Alleviating unsanitary conditions would have beneficial effects on other diseases that exacerbate HIV/AIDS, such as malaria. Improving sanitary conditions such as sewage and garbage disposal eliminates breeding grounds for the mosquito that acts as a vector for malaria (Lauer, 2006). Making nutritional changes in a population is feasible and affordable. For the price of one condom, most macronutrients can be supplied to a woman for the duration of a year. Vitamin A costs only $0.02 per capsule, and only two capsules are required per year. If taken weekly, iron supplements cost US$0.02 per year for a child. Treatment for parasites cost US$0.02-0.25 per year (Stillwaggon, 2008). In addition, the presence of intestinal parasites can cause anti-retroviral treatment to fail (Stillwaggon, 2008). Thus, solutions should focus on reducing the ramifications of poverty prior to tackling behavioural change.

Some questions surrounding this topic are still unanswered. An increase in mortality rates of young women born during the 1983 famine in Ghana was witnessed starting in 2002. This trend could be explained by a possible latent effect of perinatal hunger on the functioning of the immune system that puts women at an increased risk of contracting HIV later in life when they have reached sexual maturity (Lauer, 2006). To the best of the author's knowledge, this possibility has yet to be fully explored.

Conclusion

This paper discussed the factors that are putting sub- Saharan women at risk for HIV/AIDS. Risk factors discussed related to 6 of the 12 determinants of health identified by the Public Health Agency of Canada: income and social status, education and literacy, employment, physical environment, gender and culture (Public Health Agency of Canada, 2011). The author recommends a solution mediating the results of poverty before behaviour change approaches are adopted because social change cannot be brought about in a population of poverty and disease.

The issue of HIV/AIDS in women in sub-Saharan Africa is part of a larger issue embedded in the need to achieve adequate living conditions for women including adequate nutrition and sanitary conditions. This is an important topic with worldwide repercussions. If women are healthy their children are healthier and more likely to attend school. As adults these children are in better health and more productive. This leads to economic growth and development on both the national and global scale (Morrison et al. 2007).

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The Ethics of Pre-Implantation Genetic Diagnosis in Practice: An Analysis of the Feasibility and Ethical Considerations of Applying and Regulating Genetic Enhancement

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Résumé :

(traduction)

Le diagnostic préimplantatoire (DPI) compte de nombreuses applications pour entreprendre une thérapie et pour augmenter le potentiel humain. Dans un article précédent, j'ai présenté des arguments en faveur de tous les types de DPI, qu'il s'agisse de traitements médicaux ou d'interventions pour augmenter le potentiel humain. Ces arguments étaient fondés sur l'absence de distinction morale entre la thérapie génique et l'amélioration génétique. Par conséquent, si on ne peut établir de distinction entre la thérapeutique et l'amélioration génétique sur le plan moral, on ne pourra définir le caractère moral des applications du DPI qu'en fonction de leur processus et non de leur finalité. Bien que cet argument semble logiquement vrai, on croit qu'il est possible et nécessaire de faire une nette distinction, sur un plan pratique, entre ce qui est moralement admissible et ce qui ne l'est pas, dans le cadre des applications du DPI à des fins d'amélioration génétique. Afin de bien faire cette distinction, cet article passe de l'analyse de la substance morale du DPI en tant que technologie à l'étude des agents moralement concernés employant le DPI. En tant qu'êtres humains, nous sommes probablement à la fois responsables et peu fiables sur le plan moral en tant que consommateurs du DPI : ce qui constitue la base de la délimitation de pratiques acceptables en matière du DPI.

Mots-clés : Bioéthique, fécondation in vitro, diagnostic préimplantatoire, amélioration génétique, bio libéralisme

Abstract:

Pre-Implantation genetic diagnosis (PGD) has many therapeutic and enhancement applications. In a previous work, I presented arguments in favour of all types of PGD, whether for medical therapies or human enhancement. These arguments were based on the absence of moral distinctions between genetic therapy and genetic enhancement. The implication of these arguments is that, if one cannot distinguish between therapy and enhancement on moral grounds, then all PGD applications must be either moral or immoral. Although logically speaking this argument may be true, in practice I believe that it is possible and necessary to draw a line between what is morally permissible and what is not with respect to applications of PGD for genetic enhancement. In order to draw this line, I move away from analyzing the moral substance of PGD as a technology and focus instead on the moral agents that will employ PGD. As humans, I believe we are both morally accountable and morally unreliable as agents for the use of PGD, and this feature forms the basis of the delineation of acceptable PGD practices.

Keywords: Bioethics, in vitro fertilization, pre-implantation genetic diagnosis, genetic enhancement, bioliberalism

Pre-implantation genetic diagnosis (PGD) is a genetic screening practice associated with *in vitro* fertilization (IFV) of human ova. At the morula stage of embryonic development, the embryo consists of a ball of genetically identical cells, and the removal of one for PGD allows genetic profiling of the embryo without doing it any harm. Negative selection (NS), or the discarding of embryos containing undesirable alleles, is currently being performed in IVF clinics for diseases such as Huntington's, Tay-Sachs and cystic fibrosis (Purdy 1996; Abraham, 2012). Positive selection (PS), or the selection of embryos that *do* contain a *desirable* allele, is another application of PGD and is most commonly employed today for sex selection (Abraham 2012).

In a previous work, I presented arguments in favour of all types of PGD (Bleeker 2013). I first presented a summary of the support for NS, which I will summarize in the following paragraphs. For debilitating, painful of life limiting diseases, NS, or 'gene therapy' (GT) is an attractive technology because it prevents suffering of the unborn child and distress of the parents (Abraham, 2012; Glover, 1984). It is also supported by a variety of bioethicists according to various theories (Tooley, 1972; Purdy,1996; Thompson, 1971; Singer, 1974), but both NS and PS (called 'genetic enhancement' or GE) of embryos likely resonates best with the bioliberalism philosophymore specifically, a subset of bioliberalism, called transhumanism. Transhumanists argue that genetic selection of embryos could benefit the future individual by improving physical wellbeing, intelligence, emotional stability and resiliency to stressors. To a transhumanist, the failure to use such technologies would be a failure to move humanity forward (Roache & Clarke, 2009). Overall, GT of embryos is favourable to many Canadian families, and there is increasing interest in PS by parents as well (Abraham, 2012). Given the current stance of the Supreme Court of Canada, which prohibits PS of embryos for sex and GE in general, American and Canadian parents have shown willingness to participate in medical tourism in Mexico, where IVF clinics will provide sex selection during PGD (Abraham, 2012). There is not, however, widespread support for PS of GE by Canadians or Americans (Roache & Clarke, 2009; Bostrom & Savulescu, 2008). This presents a dilemma when addressing policy decisions about regulation of PGD applications in Canada – policy should reflect moral rightness as well as provide Canadians with local, safe health care options.

In a previous work, I explored the moral distinction between GT and GE (Bleeker, 2013). In order to find GT morally permissible, but not GE, one must make some moral distinction between the two selection types. My exploration found that such distinctions were weak, and the logical implication of weak distinctive arguments between GT and GE is that we must either accept both or accept neither (because they are morally equivalent). Despite the equivalence logic, I do believe that a line can be drawn between acceptable and unacceptable PGD practices, and I believe that this line is a practical one that can be determined by the analysis of PGD regulation strategies. Through such analysis, I believe it is possible to draw a conclusion in support of some GE in practice that has satisfactory applicability in medicine today. For example, GE can be used to improve psychological resiliency, resistance to chronic diseases and infectious diseases, and absence of allergic or autoimmune conditions.

An important theme in this discussion will be policy and regulation that can be used to guide the application of PGD technology, and whether such regulatory needs preclude the moral integrity of GE. There is thus one last important assumption to point out: I will assume that, in any given situation, the law would favour the "moral winner." This is obviously not the reality, but it will allow me to assume that certain practices *would* be executed lawfully as long as they were deemed morally sound, and thus provide arguments based on their effect on society.

GT is accepted on the basis of duty to prevent pain and suffering, and due to the moral rightness of practices, even those that are genetic, restore baseline human functioning. GT has subsequently been proven to be indistinguishable from GE. Arguments that claim that GE is either a purely selfish parental wish, a form of eugenics comparable to the Nazi regime, or an evil process that will perpetuate immoral sex selection have proven to be weak. It is also unlikely that we can rely on our intuitive repugnance to GE to guide debate of its morality (Bleeker, 2013).

Where does that leave us? Is bioconservatism a worthless moral attitude when applied to GE by PGD? Are we to adopt the opposite view, transhumanism, and enforce all forms of GE using PGD? Before defending my own conclusions to this impasse, I would like to present one final argument made by bioconservatives. I believe this argument to be the most important in influencing my conclusion because it shifts the perspective of the debate. Instead of assessing the objective morality of GE using PGD, it addresses the more subjective consideration that must be made of the moral agents who will be applying it. It also addresses the pervasive theme of regulation, and demonstrates how the need for regulation reflects the questionable morality of the agents, and not of the technology itself.

Much of the bioconservative philosophy, in addition to its concern with intuitive repugnance, attacks GE on the basis that it threatens a certain "humanness," or human dignity (Bustrum & Savulescu, 2008; Vallor, 2009). Although the debate about human dignity is an interesting one, I have chosen not to include it in this essay. I have found that debates about human enhancement often look beyond PGD as germ line genetic alterations and human cloning become ever more tangible, and are therefore largely outside the scope of this debate. The idea proposed by the bioconservatives that does influence PGD specifically, and which I think is relevant to the current debate, concerns not the process of GE itself, but the virtue of the moral agents who will be responsible for executing the enhancement. As Shannon Vallor describes, the bioconservative position rests in large part on a "deep uncertainty about the intellectual ability and moral will of today's humans to transform themselves wisely and well… do we today possess the extraordinary ambition, moral imagination and prudential insight needed to wisely and effectively implement such a radical program?" (Vallor, 2009 p. 41). The pessimistic answer, she says, is that our actions have proven that we are lacking the virtue – the ability to dependably think and act morally – to use technologies such as PGD in a moral way, regardless of whether it is moral or not (Vallor, 2009). We need look no further than the genocide, rape, sex slavery or terrorism that go on today to feel compelled to deeply distrust at least some people with the power of selecting embryos for enhancement reasons (Roache & Clarke, 2009). What bodes worse for human virtue is our apparent inability to learn from our mistakes. A major resistance to GE using PGD lies, as we have seen, in our deep desire to avoid anything related to Nazi Germany. Transhumanist philosopher Nick Bostrom describes it as a defence mechanism set against repeating the history of genocide (Bostrom, 2005). To me, however, this argument is weak. It is difficult to feel convinced that we have assimilated anything at all from our past experiences if we stood by and allowed history to repeat itself less than fifty years later in Rwanda (Bostrom, 2005). Where was our defense mechanism then?

Such doubt in the quality of human virtue leads to apprehensive thoughts about the employment of PGD for GE. As Vallor recognizes, however, an anti-GE resolution is not appropriate either, for current doubt can neither be "rejected on the grounds of cynicism alone, as transhumanists have done" nor "confirmed by mere intuition" as many bioconservatives would prefer (Vallor, 2009 p. 41). This, says Vallor, leaves the debate at an impasse until either hypothesis can be proven – thus also resulting in an impasse on application of PGD for GE.

With respect to the morality of the procedure itself, the debate has been progressing steadily in the defense of the moral soundness of GE using PGD. When considering its application, Vallor's arguments lead us to an unsatisfactory deadlock. Although unrelated to the morality of GE itself, the human virtue debate is intimately tied to this discussion due to the fact that PGD relies on moral agents for its execution. An impasse like this is of no use to applied ethics, which seek to guide practices that are already happening. Wise decisions about policy need to be made now, and we cannot afford to risk the consequences of waiting until the impasse is resolved. The last question I must ask is this: is there some way to resolve the impasse without concluding that GE is a lost cause, that its morality has been undone by its moral agents? In other words, is it possible to apply a morally sound procedure in such a way as to constrain its misuse, or should we reject the entire idea?

Bioliberalist Jonathan Glover proposed an attractive formula for implementation of GE that preceded articulations of uncertainties about humans as moral agents such as those of Vallor. Firstly, it acknowledged the distinction between the morality of GE itself and of its moral agents. Secondly, it gave some merit to our intuitions about PGD while also accommodating their transient nature. Thirdly and most importantly, it provides a practical solution to the virtue impasse and GE application.

Glover supports the GE procedure on the basis that it is morally indistinguishable from GT and on the basis that it will benefit humanity (Glover, 1984). Although bioconservatives have argued that human intuition against GE proves its immorality, these intuitions prove to be poor in logic and usefulness (Bleeker, 2013). Glover and other philosophers since him do, however, echo Vallor's concern about moral agents and their threat to the applicability of an otherwise moral enhancement procedure (Glover, 1984) As Thomas Baldwin describes in his review of Glover's work, for example, "the trouble lies not with techniques for enhancement… but with a society's commitment to equality" (Baldwin, 2006 p. 673). As much as our intuitions can be problematic, the human relationship to a procedure like GE should not be completely discarded when it comes to our virtue as moral agents. Where does that leave us with regards to implementation of GE?

Perhaps the dogma "optimism in principle, caution in practice" (Baldwin, 2006 p. 673), is the best way to summarize the two mutually crucial components of GE implementations; in other words, the dogma of acceptance not only of the morality of the GE procedure, but also that constraints may be necessary to protect against the poor virtue of its human agents. As with other new or powerful technologies such as virus engineering, geo-mapping or social media, I believe that regulation of GE applications is not only appropriate, but it is necessary if we are to benefit from such powerful (and otherwise morally sound) technologies while restricting their exploitation by those of poor virtue.

I recognize the disadvantage of implementing regulations: one has replaced the problem of power given to a morally suspect humanity with power given to a morally suspect few. Who will enforce the regulations? More importantly, who will decide which to enforce? These questions could be answered in the cynical perspective of the virtue debate. We could say that it is doubtful if *any* body of power will prove to have moral virtue, and that the powerful few will exploit GE in immoral ways, and that all potential for GE to benefit humanity will be lost.

One of Glover's central points in his analysis of GE implementation is that the demand for caution does not necessitate an outright ban on enhancement (Fost, 2004). Acknowledging regulation as a necessary concession does not preclude the possibility that PGD is both moral and beneficial to humanity (discussed in detail in another work) (Bleeker, 2013). Should we destroy all the viral vectors we are developing for the delivery of drugs because centralized bodies restrict its use for biowarfare? Should we destroy all communication satellites because regulation of their application is necessary to protect privacy? Should we destroy all forms of social media because a powerful few can restrict its use for pornography, pedophilia or hate crimes?

If the risk of undesirable outcomes were enough to stop a technology from going forward, we would see little innovation, as most new technologies come with risks (Fost, 2004). Recall that even libertarians such as Nozick are willing to cede some autonomy in exchange for a rights-based regulation system (Glover, 1984). As there are appropriate, rights-based regulations in place for satellite or internet use, there must be some appropriate version of regulation available for PGD. I propose that regulations should be considered, but only in 2 ways: 1) as an equalizing force, and 2) to prevent rights abuse. In the first case, regulation would not favour one outcome or another but may flip flop in its trajectory depending on the ratio between two outcomes, the perfect example being the sex ratio equalizing regulation proposed by Nozick (Glover, 1984). In the second case, our decisions could mimic existing rights-based legislature for other technologies. In addition, it could include Glover's suggestion that centralized bodies exist only to enforce regulations, and to act as veto in otherwise public decisions about the legislature (Glover, 1984). This democratic implementation of PGD regulations would both reflect the public's current pessimistic intuitions about human virtue and provide flexibility for gradual changes in our intuitions (Glover, 1984).

Luckily, in the case of PGD, there are several biological laws that will regulate the progression of PGD in a cautious and gradual way. To start, allowing parents to select embryos with the intent of enhancing their children will not produce unbridled enhancement of children born through PGD, nor will it produce an extreme phenotypical enhancement in one generation. There are two forces behind this. First, PGD does not create genetic material *de novo*, and is thus limited by the available genetic material. A woman has a limited number of eggs. As genes are added to the list of desired phenotypes, the probability that any one embryo will contain them all decreases exponentially. Second, an embryo that was selected because it has a gene linked to increased height will not produce a 7-foot person. Mendelian traits, or phenotypes that are linked to only one gene, are rare (Abraham, 2012). The majority of our traits are the products of several genes interacting with each other and with the environment in complex ways, and so the effect that GE using PGD will have on progeny will be limited to Mendelian genotypes (Abraham, 2012).

In summary, a combination of Glover's principles and biological limitations provides a very practical way forward from the transhumanist-bioconservative impasse. GE using PGD is morally indistinguishable from GT using PGD. Limiting its use is illogical, especially while we simultaneously use GT for the benefit of humanity. GE implementation need not produce inequality, whether socioeconomic, gender-based or rights-based. Despite the absence of rights-abuse, change in human intuitions may come slowly, but I believe that taking a libertarian but cautious approach in the application of GE using PGD would facilitate that adjustment process and provide us with concrete experiences on which to critically evaluate our intuitions. Based on historical examples of novel ideas about technology and human social structures, a shift in our moral compass and an acceptance of its benefits seems entirely possible if we employ appropriate regulation and implement GE gradually.

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Queers in the Classroom: The Role of Sexual Identity in the Academic Experiences of Gay Male Graduate Students

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Résumé :

(traduction)

Les expériences de trois étudiants masculins du cycle supérieur qui s'identifient comme homosexuels ont été explorées afin de comprendre le rôle que l'orientation sexuelle jouait dans leur vie scolaire. Grâce à des entretiens semi-structurés, les participants ont pu partager leurs expériences en tant qu'étudiants masculins gays du cycle supérieur, et les effets sur leur expérience éducative. Une approche modifiée basée sur la théorie ancrée (« *grounded theory* ») a servi à l'analyse des entretiens retranscrits. Trois thèmes principaux s'en sont dégagés : a) le choix de divulguer son identité sexuelle en milieu scolaire ; b) les défis rencontrés dans le cadre des interactions avec les pairs ; et c) les avantages d'être un étudiant masculin gay au cycle supérieur. Les résultats suggèrent que la gestion et l'expression de son identité sexuelle sont des processus importants qui interagissent avec plusieurs aspects de la vie des étudiants homosexuels masculins.

Mots-clés :

Hommes homosexuels, identité sexuelle, école des études supérieures, étudiants du cycle supérieur, expérience scolaire

Abstract:

The experiences of three self-identified gay male graduate students were explored to understand the role that sexual orientation played within their academic lives. Through semi-structured interviews, the participants were able to share their experiences of being a gay male graduate students and the effects on their educational experience. The transcribed interviews were analyzed using a modified grounded theory approach. Three main themes emerged: a) choosing to disclose sexual identity within the academic setting; b) challenges encountered when interacting with classmates; and c) benefits of being a gay male graduate student. Findings suggest that managing and expressing one's sexual identity are important processes that interact with several aspects of the life of gay male graduate students .

Keywords:

Gay males; sexual identity; graduate school; graduate students; academic experience

Introduction

The literature on sexual minority (lesbian, gay, bisexual, or transgender individuals) university students is often framed in terms of challenges and homonegativity. With regards to challenges, studies have found that sexual minority students face substantial levels of harassment. Selfreported rates of verbal harassment directed at sexual minority students ranged from 65% (Herek, 1993) to 75% (D'Augelli, 1992), and 25% of students reported being threatened with violence (D'Augelli, 1992; Herek, 1993). Herek's (1993) sample was mostly undergraduates; however, when graduate students were extracted it was found that these students experienced lower levels of harassment. In a more recent study, Rankin (2005) reports that one third of sexual minority undergraduate students experienced harassment within the past year. This number was slightly lower among sexual minority graduate students. Among both sexual minority undergraduate and graduate students, three-quarters viewed the campus climate as homophobic. This contrast between the incidences of harassment and the perceived campus climate demonstrates that despite a minority of sexual minority students experiencing harassment on campus, the majority of sexual minority students feel their campuses are unsupportive of sexual minorities.

The second theme within the literature involves student attitudes toward sexual minorities. It is often reported that male undergraduate (Jewell & Morrison, 2010; Lambert, Ventura, Hall, & Cluse-Tolar, 2006; Swank & Raiz, 2010) and graduate (Newman, Dannenfelser, & Benishek, 2002) students hold more negative views toward sexual minorities, yet some studies have found no gender differences (Cotten- Huston & Waite, 2000; Korfhage, 2006). Having strong religious convictions (Cotten-Huston & Waite, 2000; Newman et al., 2002; Rainey & Trusty, 2007), a more conservative political alignment (Newman et al., 2002; Rainey & Trusty, 2007), and more traditional gender role attitudes (Korfhage, 2006) were also associated with holding more negative views toward sexual minorities.

Other research has found that upper-year students (undergraduates in their third and fourth year) hold less negative views of sexual minorities than lower-year students (undergraduates in their first and second year), indicating that tolerance increases as one proceeds through university (Lambert et al., 2006); however, the views of lower-year undergraduate students on sexual minorities has improved over the years as demonstrated by a study conducted by Altemeyer (2001). The author assessed the attitudes of incoming undergraduate students every year for ten years and found a significant and positive change in more accepting attitudes toward sexual minorities.

Unfortunately, little research has been conducted to assess how sexual minority students perceive and interact within their post-secondary institutions (Longerbeam, Kurotsuchi Inkelas, Johnson, & Lee, 2007). Of the research that has been conducted, one of the themes to emerge was the challenges and benefits of disclosing one's sexual orientation. In an older study, Lopez and Chism (1993) found that undergraduate students made daily decisions about revealing their sexuality in public, particularly within the classroom. Their participants carefully assessed the classroom climate before deciding to disclose. Participants found it easier to disclose in upper-year courses, as they felt that the students were more receptive.

Stevens, Jr. (2004) investigated the experiences of gay male undergraduate students and reported that disclosure of one's sexuality led to the development of support networks. These networks, composed of other gay students or accepting heterosexual peers, provided balance to the homophobia and heterosexism experienced on campus. Participants described certain campus groups, particularly fraternity houses or athletic teams, as unpopular environments for gay males. Participants felt that these groups were hyper masculine and heterosexually focused. This sentiment was also reflected by the participants in the Lopez and Chism (1993) study.

Chur-Hansen (2004) interviewed gay and lesbian medical students in Australia. The author found that secrecy about their sexual orientation was a dominant theme among the student responses. A majority of the students were afraid of university staff finding out about their sexuality. Gossip was a second theme to emerge. The participants were worried that trusted friends would gossip about their sexuality to other classmates and faculty. Because of these fears, many students did not disclose their sexual identity.

Research Question

The current qualitative study will be primarily exploratory in nature due to the lack of empirical literature available. The main research question to be asked is: How does a gay man's sexual orientation affect the graduate school experience? It is acknowledged that this research question is relatively broad in scope. This was purposefully sought, as qualitative inquiry allows for the elaboration of research questions throughout the research process (Maxwell, 1998). A broad research question also reduces personal motives that may influence the research process. For example, the author's research serves a largely personal purpose, in that he has a strong association with the topic.

Methodology

Sample

This study was conducted as part of a class requirement. Due to the limited timeframe of the class, a small sample of three individuals was recruited. Small samples allow for cross-case comparisons and monitoring of the interview data in relation to theoretical developments, something that cannot be reasonably done with larger samples (Crouch & McKenzie, 2006). Although a small sample size does not allow for definitive conclusions to be made, the exploratory nature of the current study does not set out to make such conclusions. Instead, exploratory research with smaller samples intends to formulate propositions, not verify them (Crouch & McKenzie, 2006).

Purposeful sampling was the technique used to select participants. This type of sampling allows for a selection of cases that can provide the richest research data possible, since the data is not randomly sampled (MacDougall & Fudge, 2001). There were two main considerations made with regards to the selection of the sample. Firstly, it was decided to focus exclusively on gay males due to the small sample size required for the class assignment. The experiences of lesbian, bisexual, and transgender graduate students may differ drastically from gay males and with the small sample size, representative data would be difficult to generate if the sample was not heterogeneous. Secondly, there was a decision to focus on the experiences of only graduate students since their experiences were underreported within the literature.

Convenience sampling was used for recruitment, as one of the participants was known to the author. This participant then introduced the researcher to two of his classmates. The author did not know these two individuals. Each participant was contacted and agreed to participate in the study. The objectives of the study and the procedure of the study were discussed with the participants. Participants were gay male graduate students enrolled at a Canadian university. All were Master's students in the last year of their studies. The average age was close to 25 years.

Procedure

As this study was conducted as part of a class requirement, the professor of the class obtained ethical approval for the study in advance. Since sexual identity can be a sensitive subject, the utmost care was taken in ensuring that the collected data remained anonymous and confidential. Informed consent was acquired from each participant. During this consent process, participants were told that they were under no obligation to answer any questions that may make them feel uncomfortable and they were made aware of their right to withdraw at any time. Each participant was assigned a code and their names did not appear on any documentation.

Data collection involved the use of semi-structured interviews, with each lasting approximately thirty to forty five minutes. All interviews took place at the author's office in his research centre. Reflexive work completed after the original interview brought forth slight modifications to the interview protocol. It was determined that some of the questions asked were leading in nature and did not facilitate a conversational type of interview. Altering protocols is a common occurrence in qualitative inquiry, as "you can change your interview questions depending on what you learned or failed to learn" (Rubin & Rubin, p.145, 1995).

Data Analysis

All three of the interviews were transcribed, verbatim, by the author. Data analysis techniques consistent with grounded theory (Strauss & Corbin, 1998) were employed. The data analysis took place in stages. The first step involved the open coding of data, wherein the constant comparison technique was used. Codes were compared within each individual transcript and across all three transcripts. Seeking out disconfirming data was continuously utilized throughout the coding process in order to increase validity (Maxwell, 1998).

Following open coding, focused coding was completed. This type of coding allows for data to be synthesized and placed into meaningful categories and subcategories. The last step involved axial coding, which establishes linkages between the categories and subcategories. This type of coding is more conceptual than descriptive (Charmaz, 2006). Throughout the latter stages of coding, the use of theoretical memos was prevalent. These memos allow for the researcher to write down his thoughts about any linkages within the data that he perceives (Marshall & Rossman, 2011).

Reflexive work was utilized throughout the data analysis. The author's presuppositions of the experiences of gay graduate students were bracketed out prior to the beginning of analysis. The author also answered his own interview questions, which is a technique used to distance the researcher from his or her own experiences (van Heugten, 2004). As the author was conducting this research as an "insider" and a peer of his research participants, this distancing was of particular importance. Once codes were developed, the author compared them to the responses that he had provided in his own interview. This was done as a way to reintegrate himself back into the data analysis.

Results

Through analysis of the three interviews, three themes were identified: 1) choosing to disclose within the academic setting; 2) challenges encountered when interacting with classmates; and 3) benefits of being a gay male graduate student. The effect of sexual orientation on interpersonal relationships and managing one's identity as a sexual minority were common themes throughout the data.

Choosing to disclose within the academic setting

The participants did not place much emphasis on their own sexuality within their academic studies. Participants stated that some of their classmates were unaware of their sexual orientation, with one participant stating that those who he thought needed to know about his sexuality knew about it. It came into question whether disclosing in the classroom was possible, as evident by the following statement: "*I don't know if you can actually bring it out in an academic setting…unless you want to be, 'As a gay male, I feel this'*". It is up to the individual to decide if they want to disclose their sexual orientation or not. One's sexual identity can also emerge passively from social settings into the academic setting. This emergence was due to the fact that individuals within the program often socialize outside of school.

Challenges encountered when interacting with classmates

The richest category to emerge from the data was the participants' interactions with their classmates. The participants had expectations that their classmates would be intelligent, mature, and professional. As one participant stated, "*these people are supposed to be a cut above what I experienced previously in my undergrad*". These expectations were often not actualized. Participants were surprised with the actions and words of close-minded peers. Upon hearing classmates say "*that's so gay*" one participant stated that *"…you would almost expect that they would understand the things that they are saying and would understand the consequences of the words that they use, but they don't*".

Although professionalism existed within the program, its genuineness was questioned. On interacting with a student who was thought to be uncomfortable interacting with sexual minorities, one participant stated "*they can front and pretend as if they are comfortable in a classroom setting because they have no choice*". Protocols for conduct existed with social cues influencing how people acted. The participants also spoke of the gossip that could arise within their program, specifically with relation to how they identified themselves sexually.

The participants noted differences when interacting with heterosexual female and male classmates. Two participants stated that they did not think they were treated differently by either females or males; however, they were able to provide examples of males being less comfortable in their interactions. One participant stated that it was easier to interact with females as, "*they don't view you as a threatening person*". With males, there was greater hesitation. One participant stated "*I don't think they understand what it means to be gay*".

Participants often felt there was a lack of understanding of homosexuality in general by their classmates. Within academic settings, there was concern from the participants that they would be "*pigeon-holed*" as the "*gay one*." Participants did not want others to think that their opinions were one-dimensional. One participant stated "*just because I have this opinion, doesn't mean that it's coming from my gay experience*". They anticipated equal respect from their classmates regardless of their sexuality.

Although none of the participants reported being discriminated against, some of their classmates did show a lack of knowledge and understanding of sexual minorities. It was shared that some classmates believed that homosexuality is unnatural. When asked to describe the classmates that held these views, the participants stated that it was mostly an issue of political affiliation, such as being more "*right-leaning*" or conservative.

Benefits of Being a Gay Male Graduate Student

The last category to emerge was that of the benefits of being a gay male graduate student. The participants viewed themselves as more open-minded and better able to take the perspectives of others because of their sexual minority status. For example, they were able relate to other students of a minority status. One participant stated that a benefit was the bonds developed with female classmates and colleagues. He described that women are often "*more comfortable*" with gay males and are more likely to form friendships. Having other gay male students within the program was stated to be beneficial as it allowed for a sense of group camaraderie to emerge. One participant stated that it was beneficial to have that connection and to share information that others may not necessarily understand.

Discussion

This study explored the processes and experiences of three gay male graduate students. The participants all selfidentified as gay males, but they did not feel that this was a central part of their identity. This was found both in general terms and specifically within graduate school. The participants expressed fears of being "*pigeon-holed*" into a onedimensional figure that is viewed predominantly in terms of their sexuality. Due to this, the participants did not always readily disclose their sexuality. This was not done for fear of harassment or discrimination but as a way to have their opinions respected based upon merit, not on their sexual orientation.

The rationale for selective disclosure differs from that experienced by the accounts of undergraduate students within the literature. Lopez and Chism (1993) report that their participants assessed the dynamic of their classroom environment before deciding to disclose their sexual identity. This assessment was completed primarily for safety and comfort. The participants within the current study did not mention any concerns of their safety in the classroom as gay males. This difference could be attributed to the dated research of the Lopez and Chism (1993), but it also provides evidence that the university environment may be different for undergraduate and graduate students. As graduate students are typically older than undergraduates, they may feel more comfortable with their sexuality and less concerned with the reactions from others.

The participants did not report experiencing harassment or discrimination because of their sexual identity on campus or within the classroom. This follows the dissipating trend of discrimination and harassment found within the literature. There were no reported problems in interactions with professors or administrators. Fellow classmates were described as generally positive, but there were some individuals who did not agree with the "*homosexual lifestyle*". These classmates did not escalate this belief into discriminatory practice, perhaps due to the protocol of social conduct that was applied within the classroom. Classmates with prejudices against sexual minorities may not have wanted to voice these opinions because homophobic speech would not have been tolerated within the classroom. This result is similar to what Jewel and Morisson (2010) report in their analysis of undergraduate students with negative attitudes towards sexual minorities. They found that these individuals were reluctant to publicly express their feelings for fear of the social repercussions that could result.

Although it was discussed that gossip did not drastically influence the graduate school experience, its existence violated the participants' expectations of professionalism within their program. Interestingly, there seemed to be greater backlash against the perpetrators of this gossip. This could be related to "*straight allies*" being present within the participants' program. Although this was not mentioned within the interviews, "*straight allies*" are heterosexuals who are supporters of sexual minority causes (Stotzer, 2009). These "*straight allies*" may have found the gossip to be unsupportive of their gay classmates and therefore socially reprimanded those who spread or initiated the gossip.

Participants varied in their opinions of the causes of the homonegative interactions with their classmates. Two respondents framed their classmates' behaviour in more political ideological terms. Those who were more "*conservative*" were more likely to express these homonegative behaviours. This finding is similar to that found in the literature (e.g., Newman et al., 2002; Rainey & Trusty, 2007). This finding may also be somewhat influenced by the participants being enrolled in a department where one's political philosophy may be presented more openly than other departments.

One participant thought that the gender of his classmates was a much stronger influence than the political beliefs of his classmates. Female students were thought to be more open to sexual minority issues than male students. Some, but not all, male students had greater discomfort and were more apprehensive in interactions. This gender divide is also supported within the literature (e.g. Jewell & Morrison, 2010; Lambert et al., 2006; Newman et al., 2002; Swank & Raiz, 2010).

Despite the challenges that were discussed among the participants, benefits or strengths of being a gay male graduate student were also presented. Although the participants did not view their sexuality as the most defining characteristic of their personality, the ability to discuss the benefits of being gay demonstrates that they take pride in their sexuality. In the study conducted by Chur-Hansen (2004), where participants were not open about their sexuality and feared discrimination if they were to disclose, participants could not provide examples of any benefits of being a gay student and instead listed the challenges associated with it.

The results from this research can be applied to the general health and well-being of gay male graduate students. It was evident that having a social network comprised of supportive peers could help to alleviate the stress of classroom encounters with individuals that may not have had favourable attitudes towards sexual minorities. As the participants did not recount experiencing any form of discrimination on campus, it may demonstrate that the educational institution had measures and policies in place to ensure that discrimination against sexual minorities would not be tolerated on campus. Social and institutional support are therefore instrumental in promoting the well-being of sexual minority students.

Several limitations must be acknowledged within the current study. The exploration of the topic was something that could not be studied fully with interview data from only three participants. It would have been optimal to conduct more than one interview with the participants and to provide them with this document to verify its accuracy; however, time constraints did not allow for this to happen. The city in which the study was conducted may have also influenced the data since it is an urban centre. A university in a more rural location may have resulted in different responses from participants. The close relationship the author had with the participants may have also affected the questions that were posed during the interviews, as he may not have delved as deeply into certain topics as he would have with participants that were not known to him personally.

This research did not focus on the experiences of other sexual minorities, such as lesbians, bisexuals, or transgender individuals. Their experiences are important and future research should be conducted with these important populations. Racial diversity was not explored fully within this study and should also be studied in greater detail. Although this research attempted to sample from a discipline with an equal distribution of female and male students, it was still a discipline within the social sciences, which historically has a greater presence of female faculty than other disciplines. Students within more male dominated disciplines, in both enrolment and historical contexts such as science or engineering, might provide different experiences than those in the social sciences.

Despite these limitations, this study provided an understanding of the experiences of gay male graduate students. The research provided an opportunity for gay male graduate students to express their academic experiences, something that the empirical literature has not often accomplished. From the analysis of these experiences, it was found that managing one's identity as a gay male is a dynamic process that involves contextual, interpersonal, and intrapersonal variables.

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Nurse Navigation and the Transition to Cancer Survivorship: A Review of Determinants Essential to Program Success

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Résumé :

(traduction)

Les programmes d'infirmières-pivots occupent une place de plus en plus importante dans le domaine de la cancérologie. Comme nouveau domaine, l'application d'intervenants-pivots engage les infirmières et les professionnels de la santé assistant les patients à surmonter les obstacles qu'ils rencontrent avec le cancer tout au long de la vie. Le concept de navigation des patients par un intervenant-pivot est en train de s'étendre pour se concentrer davantage sur la survie après le cancer, décrite comme étant la période qui suit un traitement actif du cancer et pendant laquelle les patients se heurtent souvent à des obstacles qui influent sur leurs soins et leur qualité de vie. Grâce aux compétences et modalités d'intervention spécifiques, notamment par l'éducation, la communication et la coordination, les intervenants-pivots sont en mesure de contribuer à la réduction des disparités telles que les lacunes en matière de connaissance et communication, et ainsi facilitent l'accès optimal aux soins des survivants du cancer. L'accès aux soins de santé est un déterminant important de la santé au Canada. Ces programmes d'intervention axés sur la survie après le cancer incorporent les services de soins de santé, permettant ainsi aux patients atteints du cancer de surmonter les obstacles et d'améliorer leur état de santé. La présente analyse examinera les origines du domaine de pratique de l'infirmière-pivot, soulignera les compétences d'un intervenant-pivot qui sont essentielles à la réussite de ce programme, et révélera enfin les implications d'un tel programme.

Mots-clés : Programmes d'infirmières-pivots en oncologie, survie au cancer, accès aux soins

Abstract:

Nurse navigation programs are becoming prominent in the field of cancer care. As a newly emerging field, nurse navigation employs nurses and other health care professionals who assist patients in overcoming barriers throughout the cancer continuum. The concept of nurse navigation is being extended to focus on survivorship, which is described as the period following active cancer treatment where patients often encounter barriers affecting their care and quality of life. By utilizing specific skills and modalities, including education, communication, and coordination, survivorship navigators are able to assist in reducing disparities such as knowledge and communication inadequacies, thus, facilitating optimal access to survivorship care. Access to health services is an important determinant of health in Canada. Survivorship navigation programs incorporate health services, providing a method in which cancer patients can overcome challenges and improve their health outcomes. This review will discuss the origins of nurse navigation, highlight navigator skills and modalities, which are essential to program success, and finally discuss the implications of a survivorship navigation program.

Survivorship nurse navigation, cancer survivorship, access to health care

Introduction

The concept of nurse navigation is becoming increasingly prominent in the health care field. Often facilitated by nurses or other trained health care professionals, nurse navigation is a method to assist cancer patients and their families in overcoming health care system barriers and in gaining timely access to care throughout all stages of the cancer continuum (Pedersen & Hack, 2010; Oncology Nursing Society, 2010). When nurse navigation first emerged, the program aimed to reduce disparities and improve access to oncological care for marginalized populations (Ferrante, Chen & Kim, 2007; Schwaderer & Itano, 2007; Wells, Battaglia, Dudley, Garcia, Greene & Calhoun, 2008). The concept of nurse navigation is now being applied to survivorship – the period proceeding active cancer treatment where many barriers are often encountered as a result of insufficient educational resources, lack of knowledge exchange between health care professionals and patients, and diminished communication between health care providers. By integrating survivorship nurse navigation programs into cancer care, health services, which are an important determinant of health in Canada, are expanded, facilitating positive health outcomes for patients (Pedersen & Hack, 2010). This review will discuss the origins of the concept of patient navigation as well as highlight skills and modalities essential to the success of a survivorship navigation program. The implications and outcomes of program implementation will also be discussed.

Methods

A literature search was conducted using the terms “cancer survivorship,” “[survivorship] nurse navigator,” “nurse navigation program,” and “survivorship care plan” to identify essential determinants of a successful survivorship navigation program. PubMed was used and English articles from 1995 to 2012 were collected as the concept of nurse navigation was first founded in 1990 (Freeman, Muth & Kerner, 1995). Grey literature was also searched online, including documents from various cancer care organizations and national and regional cancer agencies such as the Canadian Cancer Society, the Canadian Partnership Against Cancer, and the Ottawa Regional Cancer Foundation.

Concept Origins

In 1990, Dr. Harold P. Freeman, a surgical oncologist and a former president of the American Cancer Society, founded the concept of patient navigation (Freeman et al., 1995). The program initially focused on assisting breast cancer patients from marginalized and underserved populations in gaining access to cancer care (Ferrante et al., 2007; Schwaderer & Itano, 2007; Wells et al., 2008). It included cancer screening, diagnosis, treatment, and supportive care (Harold P. Freeman Patient Navigation Institute, 2012). As the program proved to be successful, the concept of nurse navigation was adopted for further use in oncology by many health care institutions and today is becoming a growing area of research and investigation (Ferrante et al., 2007; Schwaderer & Itano, 2007; Wells et al., 2008).

Nurse navigation programs are widely implemented in the United States (Oncology Nursing Society, 2010) and are becoming increasingly popular in Canada (Canadian Partnership Against Cancer, 2010). While United States programs have emphasized the importance of assisting marginalized populations in accessing cancer care (Schwaderer & Itano, 2007; Vargas, Ryan, Jackson, Rodriguez & Freeman, 2008), Canadian programs have placed importance on providing timely access to care, informing and educating patients, coordinating care, and linking patients to proper resources (Melinyshyn & Wintonic, 2006; Psooy, Schreur, Borgaonkar & Caines, 2004).

In Halifax, Nova Scotia a patient navigation project was implemented in 2000 to assist in timely diagnosis of breast abnormalities (Psooy et al., 2004). The following year Cancer Care Nova Scotia established a breast cancer navigation program, later expanding their model to include survivorship care (Pedersen & Hack, 2010). Well-integrated programs also exist in Québec (Canadian Partnership Against Cancer, 2010), British Columbia (BC Cancer Agency, 2005), and at Princess Margaret Hospital in Toronto, Ontario, where a breast cancer survivorship navigation program has been successfully implemented and provides survivors with the appropriate education and support to meet their needs (Princess Margaret Hospital, n.d.).

Survivorship

Cancer is a disease that affects nearly 40% of Canadian women and 45% of Canadian men (Canadian Cancer Society, 2012). While the number of cancer diagnoses each year rises, medical advancements in detection and treatment have decreased the mortality rates of the disease (Canadian Cancer Society, Statistics Canada, Provincial/Territorial Registries, & Public Health Agency of Canada, 2010). This has resulted in an increase in cancer survivors totalling nearly one million in Canada today. This figure is projected to double by the year 2020, compelling health care providers to search for alternate care methods in order to support this growing vulnerable population (Canadian Partnership Against Cancer, 2012).

Often the transition from cancer treatment to survivorship, the period following active treatment, encompasses challenges unanticipated by the patient. As the frequency of visits with the oncology treatment team decreases and care is fragmented between primary care providers and specialists (Pratt-Chapman, Simon, Patterson, Risendal & Patierno, 2011), completion of treatment often leaves the patient feeling isolated with few supports and with a sense of being "lost in transition" (Ganz, Casillas & Hahn, 2008 p. 209). With a sense of ill-preparedness, survivors enter this critical stage unsure of the proper actions to take to maximize their health outcomes (Stanton, Ganz, Rowland, Meyerowitz, Krupnick & Sears, 2005; Alfano & Rowland, 2006).

In addition, survivors may experience personal alterations in physical and psychosocial domains (Alfano & Rowland, 2006). Physical symptoms such as residual pain, fatigue, and alterations in body form and function caused by previous surgical interventions and other forms of treatment may persist after treatments have ceased. Psychological symptoms such as anxiety, fear of reoccurrence, and distress may continue beyond the course of the disease and treatment. Survivors may also be challenged with overcoming cognitive alterations such as memory and concentration difficulties as a result of the primary disease or treatment side effects (Pratt-Chapman et al., 2011; Alfano & Rowland, 2006; Ganz et al., 2008; Canadian Partnership Against Cancer, 2009). With knowledge inadequacies, patients enter survivorship unsure of how to overcome challenges and maximize their health outcomes, even when physical and psychosocial effects are not apparent (Pratt-Chapman et al., 2011).

Role Characteristics

When entering survivorship, patients often have insufficient knowledge and tools to successfully overcome obstacles related to their health, survivorship care, and societal re-integration (Pratt-Chapman et al., 2011). Navigators strive to use a holistic approach to health care (Fillion, de Serres, Lapointe Goupil, Bairati, Gagnon & Deschamps, 2006; Canadian Partnership Against Cancer, 2010), addressing issues that include and surpass those directly associated with the remnants of cancer treatment. This empowers patients and reduces disparities associated with survivorship care (Canadian Partnership Against Cancer, 2010). Navigators must facilitate timely access to survivorship care and alternate services, as well as function to assist survivors with physical, informational, psychosocial, and practical needs (Pratt- Chapman et al., 2011).

The efficacy of patient navigators also hinges on the skills that they possess. Many programs, such as those in Nova Scotia, Quebec, and Alberta, are managed by Specialized Oncology Nurses (Canadian Partnership Against Cancer, 2010). These individuals are qualified registered nurses who have extensive training, knowledge, and experience in oncological care (Canadian Partnership Against Cancer, 2010; Canadian Nurses Association, 2008). Navigators must be strong communicators equipped with the ability to identify informational inadequacies and emotional issues (Canadian Partnership Against Cancer, 2010). As an empathetic advocate for the patient (Pedersen & Hack, 2010), navigators should be able to provide supportive encouragement while facilitating problem-solving and self-management strategies. They should have extensive knowledge regarding each patient's condition, treatment plan, and prognosis, as well as an awareness of the patient's environment and available services and supports (Canadian Partnership Against Cancer, 2010).

Intervention Modalities

There are many components noted within the literature as imperative to a successful navigation program. These elements have been organized into domains consisting of education, communication, and coordination; modalities that are deemed essential for program success.

Education

Following cancer treatment, patients report unawareness of long-term and late effects (Pratt-Chapman et al., 2011; Ganz et al., 2008). To illustrate this lack of knowledge, research shows that many breast cancer survivors admit to having been uninformed of lymphedema, a potentially debilitating side effect of breast cancer treatment, until they experienced the complication first-hand (Paskett & Stark, 2000). This clearly exemplifies an absence of knowledge exchange. In order to maximize health outcomes and decrease distress throughout survivorship, it is important that navigators adequately educate patients regarding the effects of their disease and treatment (Pratt-Chapman et al., 2011).

Providing cancer survivors with detailed diagnostic information, including their medical history and a summary of all completed treatments, has been shown to assist patients in the comprehension of their health condition and the associated risks (Ganz et al., 2008; Pratt-Chapman et al., 2011; Institute of Medicine, 2007). This information exchange allows survivors, their family, and their friends the opportunity to gain an understanding of the patient's condition and expectations to have following treatment. Navigators should also provide survivors with information on surveillance for cancer reoccurrence, including the signs and symptoms that require monitoring and/or medical attention (Ganz et al., 2008). Through knowledge exchange, survivors become better prepared to face and resolve late and chronic effects, as well as to mitigate risks associated with reoccurrence. Even in the absence of long-term or chronic side effects, survivors benefit from educational resources on general health and wellness, including information on balanced diets, exercise regimes, and components of a healthy lifestyle (Ganz et al., 2008).

The success of a survivorship navigation program relies heavily on the educational resources and informational exchange that is provided and facilitated by navigators. Improving patient education and access to knowledgeable health care professionals, such as that provided in a survivorship navigation program, allows survivors to gain an understanding of their condition and better control their health outcomes (Ganz et al., 2008; Pratt-Chapman et al., 2011).

Communication

In order for a survivorship navigation program to succeed, knowledgeable navigators should be readily able to communicate with their patients. To accomplish this, navigators can utilize a variety of mediums such as face-to-face meetings, online communication, and telephone consultations. Adopting these means of communication allows the survivor to conveniently contact the nurse navigator with concerns or questions, alleviating any confusion, anxiety, and distress (Canadian Partnership Against Cancer, 2010).

The Canadian Partnership Against Cancer (2010) and Pedersen and Hack (2010) report that having a navigator as a single point of contact is crucial in the success of a survivorship navigation program. Patients know whom to contact when they are in need of assistance or support, and are able to approach one individual with all of their questions and concerns. This single point of contact improves consistency for survivors. Familiarity with the appropriate contact can result in patients being more comfortable inquiring about their health care, thus greatly reducing anxiety and distress (Pedersen & Hack, 2010).

Coordination

After cancer treatment is complete, patients often find that communication is fragmented between primary care providers and specialists, leaving them "lost in transition" (Ganz et al., 2008 p. 209). Throughout treatment, primary care providers are often excluded from patient management and may not be reintroduced until the patient returns for regular appointments, potentially years later (Ganz et al., 2008). Navigators can prevent fragmentation by facilitating communication between specialists and primary care physicians, as well as between patients and their family doctors (Pratt-Chapman et al., 2011). Patients are often reluctant to transition back to their general practitioner following cancer treatment. Survivors may believe that they are not in need of a physician's assistance or that a family physician cannot adequately care for their health care needs and that a specialist would be more appropriate (Ganz et al., 2008). Consequently, navigators should initiate conversations with survivors with the goal of a successful transition back to a primary care provider (Pratt-Chapman et al., 2011).

To ease the transition from cancer treatment to survivorship, navigators can track clinical follow-up to ensure that patients adhere to their appointment schedule. It may be helpful to provide patients with a timeline of when appropriate follow-up appointments should take place and a list of physicians to contact (Pratt-Chapman et al., 2011). This decreases fragmentation and ensures that patients receive timely follow-up care from their family physician. It is also important that nurse navigators address psychological difficulties that the patient may be experiencing and refer them to the appropriate designated professionals (Ganz et al., 2008; Canadian Partnership Against Cancer, 2009). Implications Through the implementation of survivorship navigation programs, cancer care becomes increasingly accessible and understandable for patients (Braun et al., 2012). Positive outcomes in patient satisfaction result from the individualized care that navigators provide (The Ottawa Regional Cancer Foundation, 2009; Wilcox & Bruce, 2010). Navigators are also able to reduce fragmentation in follow-up care and assist survivors in identifying their needs (Braun et al., 2012). Collectively, these actions decrease survivor anxiety and facilitate self-management skills, which allow the survivor to approach and overcome societal, medical, and psychological barriers, as well as develop a personal action plan for their future (The Ottawa Regional Cancer Foundation, 2009).

Conclusion

Survivorship navigation is an emerging concept in cancer care (Pedersen & Hack, 2010). Nurse navigation programs expand upon available health services, positively impacting the health of individuals living with chronic illnesses such as cancer. Navigation programs with a strong focus on education, communication, and coordination assist cancer survivors in overcoming social, medical and psychological barriers following treatment (Pratt-Chapman et al., 2011; Alfano & Rowland, 2006; Ganz et al., 2008; Canadian Partnership Against Cancer, 2008). With the number of cancer survivors rising, the role of survivorship navigators will become increasingly influential as they improve patients' quality of life and facilitate access to survivorship care (Canadian Partnership Against Cancer, 2012).

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The Demand for Alternative Forms of Financing Universal Health Care in Canada: A Literature Review

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Résumé :

(traduction)

Le discours entourant le manque de durabilité du financement des soins de santé universels au Canada a mené de nombreux intervenants à évaluer le système actuel afin d'envisager d'autres formes de financement. Plusieurs modèles de financement des soins de sante ont été avances, notamment les comptes d'épargne-santé (CES), une hausse d'impôt et des politiques visant à contrôler les facteurs de coûts spécifiques tels que l'inflation des prix des services médicaux et hospitaliers. Cet article s'adresse aux professionnels de la santé, aux chercheurs et aux décideurs politiques, et demande que l'on se montre plus sensible quant à l'évaluation des initiatives de réforme de la santé publique relatives aux options de financement alternatives des soins de santé universels. Cette potentielle réforme publique doit être considérée afin d'améliorer le coût et la prestation des services de santé. Des méthodes privées tendent à influencer négativement, en fin de compte, sur les déterminants de la santé des individus et des populations. Des stratégies alternatives de financement sont examinées dans cet article avec l'évaluation de leurs avantages et de leurs limites, et des recommandations pour le système de soins de santé du Canada.

Mots-clés : Privatisation, réforme des soins de santé, modèles de financement alternatifs, Canada, durabilité, financement de la santé.

Abstract:

The discourse surrounding the unsustainability of financing universal health care in Canada has led many stakeholders to evaluate the current system in order to consider alternative forms of funding. Several health care financing models have been suggested and include Medical Savings Accounts (MSAs), increased taxation and targeting policy to control specific cost drivers such as price inflation of physician and hospital services. This paper targets health care professionals, researchers and policy makers and calls for more awareness in evaluating public health reform initiatives for alternative measures of financing Universal Health Care. Public reform must be critically considered in order to improve the cost and delivery of health care services since private methods ultimately impede on individual and population determinants of health. Discussed here are alternative financing strategies with an evaluation of benefits, limitations, and future recommendations for Canada's health care system.

Keywords: Privatization, health care reform, alternative funding, Canada, sustainability, financing health.

Introduction

In 2010, the total cost of the Canadian health care system was approximately CAN$ 193 billion, averaging CAN$ 5,663 per capita (CIHI, 2012). With regard to provincial budget spending in 2010, health care costs were highest in Quebec (45%) and Ontario (40%), with a national average of 38% (Palley, Pomey, Forest, 2011). This is A target of policy change at the provincial level because health care spending increasingly subordinates other budgetary needs; for example, it is suggested that if current trends continue, Ontario's cost of health care will amount for 80% of its budget by 2030. As a result, the remaining 20% of the budget would be insufficient to fund the current public education system costs (Toronto Dominion Bank, 2010).

For the past decade, the discourse of the sustainability of financing universal health care has led many politicians, economists, healthcare professionals, statisticians, and stakeholders to evaluate the current system to consider alternative forms of funding. Suggested interventions have included Medical Savings Accounts (MSAs), increased taxation as a hypothecated tax, and reform of the health care system through management of the drivers of physician services and health services costs. This paper targets health care professionals, researchers and policy makers, with a call for more awareness for evaluating public health reform initiatives to finance universal health care in order to improve the cost and delivery of health care services. Alternative financing strategies are discussed, with an evaluation of their benefits, limitations, and future recommendations for Canada's health care system.

Methodology

A literature review was performed using Scholars Portal Journals and PubMed online academic journal databases accessed through the University of Ottawa library. The keywords used for the search were "health care," "Canada," "financial crisis" and "alternative forms of funding." Articles published before 2001 were excluded because the information can be considered out-dated. One exception to the publication date exclusion criterion was the Canada Health Act legislation codified in 1985, which was included for use as a reference source. Articles were excluded if they were not published in English, did not involve an economic model or strategy, or did not evaluate the Canadian health care system. All academic articles selected were peer reviewed government or non-government organization publications. Quantitative and qualitative research articles were chosen. Online published books found through the University of Ottawa's general search forum were also used using key words "Financing health care in Canada," "health care reform." Additionally, government websites including Statistics Canada and Health Canada were used as resources for current information regarding the Canadian health care system.

Medical Savings Accounts (MSAs)

Medical Savings Accounts (MSAs) are a new financial model for funding the health care system. MSAs address key problems with user fees and out of pocket payment models (Deber, 2011). Several designs have been proposed for the implementation of these financial models. Fundamentally, MSAs are a yearly allowance that an individual or family is allotted from provincial and federal governments, which can be used to "purchase" health care services (Deber, 2011). MSAs provide a new health paradigm that allows consumers to control a portion of their health care spending rather than leaving it up to third-party insurers (Deber, 2011). Since these models are newly introduced onto the health care market, there are limitations when evaluating their effectiveness.

There are several benefits to this financial model. MSAs provide patients with more control over their use and delivery of medical services (Deber, 2011). It also allows for more organization and efficiency of the health care system by avoiding unnecessary usage and providing information and transparency to the actual cost of medical services (Deber, 2011). These effects can be explained by the economic theory underlying MSAs, which suggests that people will be more efficient purchasers if they must pay for items from a credit limit (Herrick, 2009). Economic incentives for individuals to be efficient consumers of healthcare include enhanced patient choice and empowerment, reduced government expenditures, improved system efficiency, and effectiveness including reduction of wait lists and enhancing innovation due to an increased cost consciousness (Herrick, 2009).

The MSA model assumes that the use and purchase of medical services is optional. Research shows that the highest medical expenditures are to address accidents, injuries or chronic health conditions (Deber, 2011). The MSA model would disproportionally cost those who use the health care system more because of these medical conditions. For example, in a case study involving MSAs, the use of some services did decrease when higher co-payments were introduced; however, this reduction also included necessary usage of the healthcare system, putting certain individuals at risk for serious lack of medical care (Herrick, 2009). This case study also showed that low-income persons had worse health outcomes compared to those with higher incomes (Herrick, 2009). This is because cost-sharing is associated with lower rates of adherence to medications and higher rates of adverse health outcomes, particularly among vulnerable populations including children, the elderly and those with chronic diseases (Herrick, 2009).

Opponents suggest many of the benefits of MSAs are unlikely to emerge because of the high disparity in health expenditures in the population. They suggest potential risks of adopting MSAs, including undermining insurance arrangements, transferring resources from the sick to the healthy, increasing total costs, subsidizing services of questionable value, and producing worse health outcomes (Deber, 2011).

Increased Taxation

Recent research has focused on using the tax system as a way of increasing revenue for the federal and provincial governments. An increase in taxation for healthcare is an alternative that can support equality, accessibility and universality while generating revenue (Rode & Rushton, 2002).

There are a number of possible ways taxes can be used to generate revenue. One form of taxation that has been suggested to help raise provincial revenue for health care services is a “dedicated” or “hypothecated” tax (Romanow, 2009), or a single tax dedicated solely to funding of medical services. The government would not be able to allocate money that is generated from the dedicated tax to other areas of spending (Romanow, 2009).

Research shows that Canadians support the idea of a dedicated tax, as it would improve accountability and transparency with the taxation they pay (Guy, 2002). This is beneficial as it promotes less resistance of taxation if the public knows where the money will be spent, especially if it is toward a health care system that ranks high in priority in social consciousness. The Fabian Society’s Commission on Taxation and Citizenship in the United Kingdom conducted research on public attitudes toward taxation and noted that if the public was informed on the allocation of their taxation, resistance toward increased taxes decreased. Only 40% of those surveyed agreed to a 1% increase in personal income tax toward a general pool of government revenue whereas 80% agreed if the 1% increase in taxation was spent specifically toward the National Health Service (Le Grand, 2001). Relative to Canadian society, a tax increase specifically for health care in the form of a hypothecated tax is supported, as it appears equitable.

There are some limitations to a dedicated tax approach. Given the sheer size of the health care system, the tax increase would have to be large in order to raise the necessary funds (Romanow, 2009). However, a smaller tax increase could be used to finance a portion of medical services. Additionally, this policy may not favourable to departments of finance as can reduce their ability to control taxation compared with funding from a general pool of revenues (Romanow, 2009). Furthermore, the implementation of a new tax requires high start-up and administration costs with the need to create new jobs. Revenues from other provincial taxes will be needed to support this, which may cause the allocation of resources that the hypothecated tax was meant to deter.

Cost Driver Reform

An evaluation of the main drivers of public health care spending and how these drivers can be reformed to reduce spending and offer more efficient and quality care is another strategy to reduce health care spending. A study released from the Canadian Institute for Health Information (CIHI) examined health care spending from 1998 to 2008 found that total public spending on health care increased at an average rate of 7.4% per year (CIHI, 2011). This study showed that the principal cost driver was price inflation and that the increase was most notable with physician spending and hospital spending (CIHI, 2011).

Currently, the fastest growing health expenditure is physician spending, which has increased at an annual rate of 6.8% per year from 1998 to 2008 (CIHI, 2011). Physician fee schedules are attributable to more than half of this growth at 3.6% (CIHI, 2011). This increase in costs in the past decade can largely be attributed to the increase of average weekly wages for doctors grew faster than the wages of other health service workers (CIHI, 2011). Cost control of physician remuneration must face policy reform in order to reduce spending an moderate the effects of price inflation. With respect to hospital costs, price inflation has also had a tremendous impact. As shown in the study, 60% of the total cost of a hospital's budget can be attributed to compensation for the hospital's work force (CIHI, 2011). Essentially, this puts health sector price inflation substantially above the rate of general inflation. From 1998 to 2008, the Government of Canada undertook a plan of action to control and mediate general inflation growth to a target of 1-3% (CIHI, 2011). Although this decision is out of the realm of health care, the fact labour costs are a major contributor to health care inflation was highlighted through this process. A continuation in the increased rise of health care inflation compared to general inflation will place substantial pressures on the provincial and the federal governments for maintaining and reducing health care costs (CIHI, 2011). During a time of economic uncertainty and fragility, the costs of hospital services and the increase of physician remuneration should be a significant area for policy-makers to consider for further research and focus.

A policy reform that would affect both the remuneration of physician services and the increased hospital spending is expanding the scope of practice of primary care providers and other health and social service professionals. For example, broadening the scope of practice for nurse practitioners has shown to increase patient access to care in different primary care models (DiCenso, Bourgeault, Martin-Misener, Kaalalainen, Carter, Harbman, 2010). A study conducted at a primary care facility in British Columbia found that the addition of one nurse practitioner increased the facility's patient capacity from 1,200 to 1,800 patients (Dicenso et al., 2010). Increased costs may be associated with creating a mosaic primary health care model; however, the increased attention to health promotion and chronic disease management may result in highly reduced health care costs due to reduced downstream resource, physician, and hospital utilization. This could decrease physician spending in the hospital and could also compliment efficiency and delivery of health care aimed toward the determinants of health and prevention, which has been shown to considerably decrease health costs.

Conclusion and Future Recommendations

If current spending and cost trends continue, the health care budget in Canada will amount to the majority of provincial spending and subordinate other significant budgetary needs. Alternative funding strategies including MSAs, a hypothecated tax, and cost-driver control reforms were considered as potential models to reduce the increasing costs of the Canadian Health Care System. MSAs and increased taxation may not be the most effective financial models. MSAs may impose high financial pressure on low income individuals leading to inequities and ultimately poor health outcomes. Taxation is most supported by public opinion as it appears to be an equitable way to decrease the financial pressure for the cost of health care. Taxation alone may not have the ability to finance the vast health care budget but does allow for covering a portion of health care costs.

Controlling the main drivers of health care spending, such as price inflation at the physician and hospital level, has a high potential to reduce health care costs. Policy reform that expands the scope of practice for primary care and social services may be the most effective way to stabilize these cost drivers. This requires more research and political attention, as the ability to sustain the principals of universal health care, access, and equality must be seriously considered to ultimately improve the determinants of health across Canada.

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“FYI: Can Viagra Make You A Better Athlete?” Media Review

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Résumé :

(traduction)

Article source: http://www.popsci.com/science/article/2012-11/fyi-can-viagra-make-you-a-better-athlete

Introduction : Les athlètes ont commencé à prendre du Viagra pour acquérir un avantage concurrentiel. L'utilisation de Viagra peut connaître un essor dans la communauté des sportifs en raison de sa capacité présumée à augmenter l’aptitude physique d’une personne. Cet article présente l’impact du Viagra sur la société, sur ses consommateurs et sur les organismes sportifs, et examine si ses usages prétendus à des fins de performance sont valables et sans risque.

Pharmacologie : Le Viagra agit en relaxant les cellules musculaires lisses par l'inhibition de la PDE5, ce qui augmente la biodisponibilité de la GMPc.

Résultats : Lorsque le Viagra a été administré, les sujets avaient un VO2 max plus élevé et récupéraient plus rapidement d'hypertension artérielle pulmonaire. Les autres résultats sont mitigés et mal établis.

Obstacles : Le fait de permettre le Viagra dans la communauté sportive pourrait susciter des inquiétudes auprès des organismes sportifs, et le règlementer pourrait affecter de manière inégale ceux qui en ont besoin pour une fonction sexuelle saine.

Conclusion : Ces résultats ne démontrent pas une corrélation directe entre le Viagra et l'amélioration de la performance athlétique. En outre, la prise de Viagra peut poser des risques pour la santé. Le Viagra ne doit être pris qu’après consultation avec un professionnel de la santé.

Mots-clés : Viagra, athlète, concurrence, amélioration

Abstract:

Article Source: http://www.popsci.com/science/article/2012-11/fyi-can-viagra-make-you-a-better-athlete

Introduction: Athletes have started taking Viagra to gain a competitive edge. Viagra's use might be expanding into the athletic world for its alleged boost to one's physical capability. This paper will discuss Viagra's impact on society, its users, athletic organisations, and whether its purported performance enhancement uses are valid and safe.

Pharmacology: Viagra works by relaxing smooth muscle cells through the inhibition of PDE5, thus, increasing the bioavailability of cGMP.

Results: Subjects had a higher VO2 max and recovered faster from pulmonary hypertension when given Viagra. Other results are mixed and not well established.

Barriers: Allowing Viagra into the athletic community may cause concern from sports organisations but will conversely and unequally burden those who require Viagra for healthy sexual function.

Conclusion: These findings do not directly correlate to an improvement in athletic performance. Furthermore, taking Viagra may pose as a risk to one's health. Viagra should only be taken upon consultation with a health care professional.

Keywords:

Viagra, athlete, competition, improvement

Article Summary

An article from *Popular Science* discussed a new drug duality for athletes with Viagra. The article suggested that endurance athletes such as runners, cyclists, football players, and mountain climbers may use Viagra to increase their performance ability. Viagra's potential performance enhancement properties are accomplished through muscle relaxation, vasodilation, and increased blood flow (Lecher, 2012).

Don Catlin, former UCLA Olympic researcher, stated that Viagra could be especially helpful to mountain climbers and skiers due to high altitudes and the level of performance required for these sports. Catlin believes that any benefit to supplementing Viagra would only result in a minor 1-1.5% improvement (Lecher, 2012). This paper elaborates on the reported effects of Viagra found within the existing literature and also discusses other ramifications of Viagra's acceptance into the athletic domain. It concludes by suggesting precautionary measures when taking medications and proper consultation with medical professionals beforehand.

History and Pharmacology of Viagra

Viagra was originally developed as an antianginal therapy; however, it was proven no more effective than current medications (Jackson, Montorsi & Cheitlin, 2002). In 1998, the US FDA approved the use of Viagra for erectile dysfunction since it proved to significantly enhance erectile function in adult men (Goldstein et al., 2002).

Viagra is a selective inhibitor of cyclic guanosine monophosphate (cGMP) – specific phosphodiesterase type 5 (PDE5). PDE5 degrades cGMP in the corpus cavernosum of the penis; however, Viagra increases the bioavailability of cGMP which plays a primary role in relaxing smooth muscle and thus allows for a prolonged erection (Goldenberg, 1998; Jackson, Montorsi & Cheitlin, 2006).

Interpretation and Analysis of Claims

The U.K. Sport and Drug Information Database, which monitors athletic interest in different substances, found that Viagra was among the top 50 inquiries made by athletes at 0.28% (Petroczi & Naughton, 2010). Viagra has varying effects on different types of unhealthy patients; while some showed marginal improvements, others experienced a worsened quality of life (Barst et al., 2012; Jackson et al., 2006; Lederer et al., 2012). Findings with healthy patients are more consistent.

When taken orally, Viagra is rapidly absorbed and achieves maximum plasma concentration within 30-120 minutes (Goldenberg, 1998). Viagra is typically administered in the following three doses: 25mg, 50mg, and 100mg. One study found that the vasodilatory effects of Viagra in healthy men with normal endothelium showed no statistically significant difference in hand veins (Dishy et al., 2001). Controversially, a high dose study using 100mg was found to reduce blood pressure by 7-10mmHg in resting healthy young men 1 -3 hours after intake (Goldstein et al., 2002). This lowered blood pressure could result in energy conservation and less exertion on the body. However, if blood pressure drops significantly, hypotension could become a risk.

Viagra was not found to statistically alter heart rate, blood pressure, or laboratory tests (DeBusk et al., 2004; Goldenberg, 1998; Jackson et al, 2006; Tracqui et al., 2002). VO2 is the maximum capacity for which an individual can intake oxygen in the lungs. An exercise capacity study suggested that VO2 was higher in Viagra users compared to normal subjects. This study also showed that Viagra helped sustain alveolar-capillary membrane conductance (Snyder, Olson, Jonhson & Frantz, 2008). Thus, Viagra may help improve gas exchange and oxygen saturation, which may result in a more efficient cardiac system. Increased oxygen diffusion could lower the body's cardiac output as nutrients are more efficiently delivered.

Viagra is of particular interest in altitude-related pulmonary hypertension (PH) because of its effects on gas exchange and hemodynamic abilities. High altitude environments can result in hypoxic pulmonary vasoconstriction, which increases pulmonary arterial pressure and leads to PH. Viagra may protect against the effects of altitude-induced PH (Perimenis, 2005; Vitalie et al., 2007). PH lowers exercise capacity due to reduced O2 delivery to the blood (Rubin, 1997; Weitzenblum, 2003). One particular study of healthy mountaineers found that Viagra reduced PH at sea level and at an altitude of 5400m during both exercise and rest (Ghofrani et al., 2004). Furthermore, O2 saturation may be improved after several days of high altitude exposure (Richalet et al., 2005).

Adverse Health Effects

ED effects up to 30 million men in the United States and Viagra has been used to treat over 25 million in the US (“The History,” n.d.; Tracqui et al., 2002). The number of deaths due to Viagra per filled prescription is considerably higher than other treatments for ED (Mitka, 2000; Strom, 2001). However, most deaths are usually linked to other underlying conditions like cardiovascular disease and drug-drug interactions. Risks to adverse reactions and death have been linked in those with heart murmurs, uncontrolled hypertension, hypertrophic cardiomyopathy, myocardial infarction, congestive heart failure, and contradictory medications (Dustan et al., 2004; Patrizi et al., 2001). As of 2002, FDA post-market data suggested that death and adverse events can occur in patients classified as medium and high risk. Documented cases of Viagra-related deaths are very rare in the scientific literature. In one case, a 56-year-old Caucasian was found dead after taking four times the therapeutic dose (Tracqui et al., 2002). Viagra is likely to be better tolerated in athletes; however, any use with vasodilators and exercise is cautioned against and should first require consultation with a health care professional. When combined with other drugs Viagra could become harmful in athletes and thus its use should be limited to legitimate medical needs.

Ethical Barriers

Should athletic performance be a sufficient reason to prescribe Viagra, new guidelines by the FDA would need to be drafted. Physicians, health care professionals, and the sports industry will require additional training about its efficacy and safety considerations with exercise. Ethical issues, especially from professional athletic organisations, may arise if it is classified as a performance-enhancing device.

The *New York Daily News* stated that Viagra is already commonly used in sports such as baseball, and is recommended amongst athletes due to its beneficial effects (Thompson, Red, O’Keefe, & Vinton, 2008). The *Atlantic Wire* asked NFL players about Viagra’s role in professional sports, and Brandon Marshall, a Chicago Bears receiver, stated that he had heard of other players using it to acquire a competitive edge (Wagner, 2012). Some agencies may wish to halt its acceptance into athletics: the World Anti-Doping Agency is currently funding a study to examine Viagra’s claimed performance enhancing effects (“World Anti-Doping,” 2008). This could bring tough ethical dilemmas to training athletes. Should Viagra be added to the list of prohibited substances, athletes who require Viagra for a healthy sexual lifestyle may be forced to choose between a healthy sex life and an athletic career.

Conclusions

Viagra does not improve performance and its use can endanger one’s health. In healthy men, Viagra may lower resting blood pressure and improve lung gas exchange. Recent studies show mixed results as to whether any improvement does occur and remains inconclusive. In hypoxic environments, Viagra helps reduce Pulmonary Hypertension and recovery time. More research is needed to fully determine the extent to which Viagra modifies an athlete’s body. The ethical implications in the athletic world are issues that should be formally addressed and athletes who require Viagra for their sexual lifestyle may face future inequity. Viagra administration should always be done under the supervision of a health care professional and should have a legitimate medical need as it can have adverse health effects.

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CONCOURS DE PRÉSENTATION PAR AFFICHE EN ÉPIDÉMIOLOGIE 2013

ÉCOLE INTERDISCIPLINAIRE DES SCIENCES DE LA SANTÉ — UNIVERSITÉ D'OTTAWA, CANADA

Chaque année, les étudiants de premier cycle de troisième et quatrième années suivant le cours d'épidémiologie à l'École des sciences de la santé de l'Université d'Ottawa, participent à un concours qui récompense les meilleurs projets de recherche en épidémiologie.

Les fruits de leurs travail — un article de recherche et une affiche présentée au grand public — sont de bons exemples de ce que produisent les étudiants de premier cycle à la fin de leur baccalauréat. Nous souhaitons vous présenter les lauréats du concours de 2012 et leur offrir nos félicitations pour leur contribution à la recherche épidémiologique.

2013 EPIDEMIOLOGY POSTER COMPETITION

INTERDISCIPLINARY SCHOOL OF HEALTH SCIENCES — UNIVERSITY OF OTTAWA, CANADA

Every academic year, third and fourth year undergraduate students enrolled in the Epidemiology course at the Interdisciplinary School of Health Sciences participate in a competition for the best epidemiological research project.

The products of their work — a research article and a poster presentation — are high quality examples of the output from undergraduate students finishing their Bachelor Degree. We would like to present the top scoring presentations of the 2012 poster competition and offer our congratulations for their contribution to epidemiological research.

Lauréats de la section française

CONCOURS DE PRÉSENTATION PAR AFFICHE EN ÉPIDÉMIOLOGIE 2013

Sujet : Les troubles de la personnalité

Préparé par : Tanya Roy, Erika M. Sacho

Sujet : La dépression majeure

Préparé par : Marylène Charrette, François Tessier

Sujet : L'épuisement professionnel: perdre sa santé pour gagner sa vie

Préparé par : Geneviève Galibois, Andrée-Anne Lorrain, Guillaume Quintal-Turcotte

Sujet : ADHD in Preschool Aged Children

Préparé par : Carolyne Mercier

Sujet : Les troubles de panique

Préparé par : Christopher Begin, Monika Z. Matuszewska

Sujet : Stratégies de prévention pour le trouble bipolaire

Préparé par : Patrique Bégin, Caitlin Corbett

Sujet : Le jeu compulsif

Préparé par : Roméo Ahimakin, Eric A. Laroche, Christopher L. Lee

English section laureates

2013 EPIDEMIOLOGY POSTER COMPETITION

Title: Blood Lead Levels in Children Due to Electronic Waste Exposure: A Comparison of Guiyu and Chendian, China

Authors: Alain-Philippe Abols, Hazal Koksal, Sarah Oppici, Andreanne Roy

Title: Maternal obesity and excessive gestational weight gain alter the maternal-fetal insulin-like growth factor axis: An overview

Authors: Zachary M. Ferraro, Qing Qiu, Andree Gruslin, Kristi B. Adamo

NB**:** The abstract has been presented at the Canadian Obesity Network - National Obesity Summit, Vancouver, BC May 1-4, 2013 and has been published in the Canadian *Journal of Diabetes, April 2013 volume 37* supplement 2 page S267.

Title: The Effect of the MMR vaccine on the worldwide prevalence of Autism Spectrum Disorders

Authors: Marym Abdelmaseh, Alison Mclennan, Melissa Ntiamoa.

Title: Comparison of psychosocial factors affecting HAART adherence in women

Authors: Angela Kalich, Karolina Kaminska

Title: Using Social Support Systems to Improve the Mental Health of Immigrant Women in Canada

Authors: Sarah Beaudin, Elizabeth Lovell, Katelyn Sirrs

Title: Examining the Effects of Vitamin D on Multiple Sclerosis in Canada

Authors: Piragas Puveendran, Melany Chaiquin.

Title: Factors predicting Stress Fractures in Female Distance Runners

Authors: Katerina Naddaf, Julia Britton.

Title: Global Decline in Semen Quality: Assessing the Bias in the Literature

Authors: Faduma Gure, Yasmina Siguineau, Marianne-Hani Ugas.

Title: Low Sunlight Exposure in early life and developing MS in adulthood: A structured Review
Authors: Fakhriyeh Abachi Nejad Asl, Matin Tohidi

Title: Oiling Your Brain: The Role of Fish Oils in Alzheimer's Disease
Authors: Megan Sharkey, Jacquie O'Grady

Title: The link between childhood obesity and socioeconomic status- a literature review
Authors: Mathieu Despatie, Mahdi Taebi

Title: Which physical characteristics of neighbourhoods influence walking behavior among urban adults? A systematic review and conceptual framework for future research
Authors: Justin Thielman

Title: Risk Factors and Correlates for Postpartum Depression and the Variation in Rates Between Younger and Older Mothers
Authors: Isabel Arroyo, Caitilin Finnerty, Amanda Giunti

Title: Smoking - Hero or Villain?: The Effects of Nicotine from Cigarettes on Positive and Negative Symptoms of Schizophrenia
Authors: Sallya Aleboyeh, Marcedes Michelin, Lindsay Sheinfel

Title: Depression & Marijuana Use: What do we know?
Authors: Celine El-Hajjar, Priscilla Karnabi, Layal Younes

Title: A Diagnostic Challenge: Alzheimer's Disease in Persons with Down Syndrome
Authors: Alannah Davis, Sharon Christian

Title: Risky Business: Oil Sands Production and Cancer Incidence Rates in Alberta's Native Communities
Authors: Louay Khir, Emily Nadolny.

Title: The relationship between parity and female reproductive cancers
Authors: Simone Parniak, Ellen Wallace.

Title: Type 1 Diabetes Mellitus & Bulimia Nervosa: A Problematic Duo?
Authors: Abhi Bhandari, Damaris Sarai Gomez, Glenda Marroquin, Jennifer Nguy

Title: Who Cares About Condoms? An assessment of dual method use after initiation of a hormonal contraceptive method amongst North Americans through a structured review of literature published between 1997 and 2012
Authors: Taylor McClatchie, Emma Tanner.

Title: Shining a light on Paternal Postpartum Depression: A review of risk factors, treatments, and Impact
Authors: Emma Burgess, Cameron Cottrell.

Title: Review and Meta-Analysis of Alternative Treatment Modalities for Depression in Seniors
Authors: Rachael Braund, Marufa Hoque.

Title: The benefits of a low carbohydrate and high fat content diet compared to a standard recommended intake (Canada's Food Guide Diet) to treat overweight or obese sedentary adults
Authors: Nancy Toupin, Alyssa Long, Émilie Lebel.

Title: The Effects of Pap-smear frequency on Prognosis of Cervical Cancer
Authors: Jessica Chippior, Tara Hilton, Sarah Howse.

Title: The efficacy of existing infrastructure and its impact on mortality and survival of breast cancer in women in Brazil
Authors: Emily Bray, Amaal Popat.

Title: Caffeine as a protective factor against Alzheimer's Disease
Authors: Rebecca Brodmann, Danielle Turpin, Diana Hogan

Title: A Loss of Reality and Home For A Lost Canadian Subpopulation

Authors: Shiva Ebrahimipour, Hibo Douksieh, Erin Deugo, Kelsea Lofthouse

Title: Hormone Replacement Therapy and Risk of Ovarian Cancer in Postmenopausal Women

Authors: Vanessa Thériault, Dominique Noël.

APPEL À CONTRIBUTIONS

Les critères de soumission se basent sur les douze déterminants de la santé, tels que définis par Santé Canada et l'Agence de santé publique du Canada. Idéalement, toute personne qui souhaite soumettre un manuscrit à la RISS devrait clairement identifier quel déterminant de la santé est associé à sa recherche, ainsi que la nature de cette relation : *de quelle façon le sujet à l'étude est-il relié à la santé humaine, à travers le déterminant de la santé choisi ?*

Nous acceptons des soumissions tout au long de l'année, incluant le printemps et l'été.
Vous serez informé(e) lorsque le Comité éditorial commencera la révision de votre soumission.

Vous trouverez de plus amples informations sur notre site web : www.riss-ijhs.ca

CALL FOR PAPERS

Submission criteria are based on the twelve determinants of health as outlined by Health Canada and the Public Health Agency of Canada. Ideally, anyone who wishes to submit their original work to the IJHS should clearly identify which determinant of health is associated with their paper and the nature of the relationship: *how is the subject related to human health through the chosen determinant of health?*

We accept submissions year round, including spring and summer.
You will be informed once the Editorial Committee begins to review your submission.

You will find more information on our website: www.riss-ijhs.ca