

Social Determinants of Health and Implication for Adult Education in Ghana: A Conceptual Study

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ABSTRACT

The recognition that social factors have an important impact on people's health has a long-standing history. However, there was a renewed interest when the Commission on Social Determinants of Health (SDOH) was established by World Health Organization (WHO) in 2005 to support countries and global health partners in addressing the social factors leading to ill health and health inequalities. Since then, the concept of SDOH and its applications have evolved and expanded as researchers have examined the dynamic socio-cultural and economic roots and routes to experiences of health and wellbeing in society. This paper explores how, where and to what benefit the social determinants of health concept has been applied to date, and how such applications have contributed to its critical evolution as a relevant and useful concept in health research, education and practice. This paper summarizes the key themes identified in the literature, broadly in keeping with the core material, social, cultural and economic dimensions of the concept with examples from Ghana, Africa. Through this process, this paper identifies strength and limitations of the concept and its implications for adult education, as well as knowledge gaps and future directions for work in this field, contributing to wider interdisciplinary discussions and debates around social determinants of adults' health. The research model is crucial for adult educationalists when they design course curriculum for educational institutions.

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INTRODUCTION

Human health is a complex phenomenon, which could be approached from multiple perspectives. Over the years, there has been a growing attention that health is a phenomenon that goes beyond medical care and lifestyle, but, rather, the social, cultural and economic environments in which people live, work and play (Commission on Social Determinants of Health, 2008; MiKkonen and Raphael, 2010). Such recognition has resulted in a tension between the need to consider the effects of health determinants outside the medical-care system and equally focus on the structural determinants, including those that stratify people into social categories of hierarchical power such as income, gender, race and education (Braveman, Egerter and Williams, 2011). These mechanisms or pathways through which we understand the health of individuals and groups have come to be known as the social determinants of health (SDOH) (See MiKkonen and Raphael, 2010; Marmot, 2017).

Drawing on theories in structuralism and humanism, the social determinants of health concept was established by The World Health Organization (WHO), as a vehicle for exploring the powerful relationship between people's social position, their living conditions and their health outcomes. The social determinants of health are the "conditions in which people are born, grow, live, work and age, including the health system" (WHO, 2008, p.9). In other words, they are the things that we as a society create that decisively affect the nature of health and health outcomes for different populations. The concept is often used mainly to describe any nonmedical conditions influencing health, including health-related knowledge, attitudes, beliefs, or behaviour (Braveman, Egerter and Williams, 2011). These factors of health are believed to be mostly responsible for health inequalities – the unfair and unavoidable differences in health of individuals, communities, and nations as a whole. A social determinant of health determines the health status of populations, the extent to which individuals and groups possess resources necessary for achieving their goals and satisfying their needs (MiKkonen and Raphael, 2010; Viner, Ozer, Marmot, Resnick, Fatusi and Currie, 2012; Marmot, 2017).

Attempts to address the social conditions that have effects on populations' health has a long-standing history. In 1946, the Constitution of the World Health Organization mandated itself to address the social roots of health problems, as well as challenges of delivering medical care (WHO, 2007). The

Constitution of World Health Organization defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The next major development in the field of SDOH was the Alma Ata Declaration in 1978. This was an international declaration stating the importance of primary health care for reducing health inequalities between and within countries. The Alma-Ata Declaration of 1978 emerged as a major milestone of the twentieth century in the field of public health, and it identified primary health care as the key to the attainment of the goal of Health for All (WHO, 2007). Importantly, the identification of these determinants of health was not only an academic pursuit. In 1986, the first international conference on Health Promotion was held in Ottawa, Canada as a follow-up to Alma Ata. The conference identified actions to achieve objectives of the WHO health for all by the year 2000 initiative. The Ottawa charter promotes social justice designed to provide access to health opportunities for all communities and aims to reduce health inequalities. Within the social determinants of health framework, emphasis has been placed on developing and promoting evidence-based decision-making, integrating policies that tackle several determinants, and including the development of healthy public policy, partnerships and collaborations and community involvement and local action (PHAC, 2002).

In recent developments, a number of factors have been modeled as social determinants of health. Their effects are said to be stronger than factors associated with behaviour, including diet, smoking, alcoholism and sedentary lifestyle (MiKkonen and Raphael, 2010). One of these popular models of social determinants of health was the one developed at York University Conference in Toronto, Canada in 2002. The SDOH model is considered to be useful for understanding health disparities in Canada and the world at large. The SDOH model, which consists of fourteen factors are: income and income distribution, education, employment and working conditions, unemployment and job security, early childhood development, food security, housing, social exclusion, social safety network, health services, aboriginal status, gender, race, and disability. These factors believed to produce health inequalities among populations are understood to have significant effects across race, ethnicity, gender, class, language, age differences and socio-economic differences (Dunn and Dyck, 2000). Thus, the purpose of this review is to shed light on social determinants of health. Here, this paper highlights the determinants that appear to be central to the link between populations and their social, cultural and economics of health (these will be the social, cultural and economic context of health). Following this, the literature specific to SDOH is reviewed. The review of the SDOH literature is informed by the following research questions: (1). *How, where and to what benefit has 'the Social Determinants of Health' concept been applied to-date;* (2). *How have such applications contributed to its critical evolution as a relevant and useful concept in health research and practice?"* Finally, implications for adult education and limitations of the concept is provided, alongside gaps in the knowledge base. The study focuses on a construction of a research model for social determinants of health in Ghana based on extensive literature review.

LITERATURE REVIEW

Social factors and health

The social determinants of health concept is often used to refer broadly to any nonmedical factors influencing health, including health-related knowledge, attitudes, beliefs or behaviours, such as smoking. The SDOH dimension of healthcare and promotion has continued to attract attention within the health system literature over the years, particularly within the contexts characterized as nonmedical 'care'. These include social stratification – such as status inequalities between individuals and within a social system, and structural determinants (fundamental structures of the nation state that generate social stratification), such as national wealth, income inequality, educational status, sexual or gender norms, or ethnic group. The World Health Organization's *Commission on Social Determinants of Health* (CSDH) states that the toxic combination of bad policies, economic, and politics is, in large extent, responsible for the fact that a majority of people in the world do not enjoy the health that is biologically possible (CSDH, 2008). Here, I discuss the literature, concerning social stratification and structural determinants within which societies believed to impact the health status of individuals and groups.

Over the years, increasing efforts have been made to examine SDOH, offering deeper uncovering of how dynamic material, social, cultural and economic work to maintain and promote health and well-being for different individuals and groups at different places and time (MiKkonen and Raphael, 2010; Viner, Ozer,

Marmot, Resnick, Fatusi and Currie, 2012; Agyekum and Newbold, 2016). Socio-economic differentiation based on income, education, and gender forms part of the social environment and could reflect relatively direct health benefits of having more economic resources (e.g., healthier nutrition, housing, or neighbourhood conditions, or less stress due to more resources to cope with daily challenges). Also, it includes unmeasured socio-economic factors, such as health-related behaviours (Stringhini, Sabia, Shipley, Brunner and Nabi, 2010), self-perceived social status (Wolff, Subramanian, Acevedo-Garcia, Weber and Kawachi 2010), or perceived control (Marmot, Bosma, Hemingway, Bruner and Stansfeld, 1997). For example, Whitehall Studies conducted in England (Marmot, 1968) linked social status to health by demonstrating that clerical/manager civil servants had three and half times the mortality rates of senior administrator civil servants. Based on this and subsequent studies, Marmot, Bosma, Hemingway, Brunner and Stansfeld, 1997 recommended that all modern analyses must now control for social class as they do for sex. Many more social conditions remain to be explored, as does the assumption of automatic social support and/or connection gains. For example, research on support and connection for patients identified a counter-intuitive because despite their potential, social connections can also undermine the ability to cope, for example when they are used to spread gossip and stigma (Eyles, Harris, Fried, Govender, Penn-Kekana, and Munyewe, 2017). Following the brief description of the concept, I briefly review current knowledge of how several important socio-cultural and economic factors influence health.

Neighbourhood environment and health

The location and conditions of one's neighbourhood is another aspect of social environment influencing health. For example, the physical characteristics, such as air, water quality and proximity to facilities that produce or store hazardous materials – exposures to lead paint, mold, dust or pest infections in housing; access to nutritious foods and safe places to exercise; or risk of pedestrian accident have all been linked to health (Booth, Pinkston, and Poston, 2005; Chuang, Cubbin, Ahn, and Winkleby, 2005; Giles-Corti and Donovan, 2002; Sallis and Glanz, 2006). A large body of research has examined the association between neighbourhoods and various social and behavioural outcomes including income, educational attainment, crime, substance use, sexual activity, and labour force participation (Block and Galabuzi, 2011; Hulchanski, 2010; Simpson et al. 2009).

Neighbourhoods' physical and service characteristics can create and reinforce socioeconomic disparities in health. For example, a study by the Ghana Centre for Environmental Research and Policy Analysis (CERPA) (2016) reported that poor sanitation is one of the most significant environmental problems in the Ghanaian society. According to the report, poor sanitation in neighbourhoods affects 69 percent of the Ghanaian public. It further reports that more than 90 percent of the residents in the Greater Accra region are directly affected by the negative consequences of poor sanitation. Numerous studies describe health problems that occur just by poor sanitation. It is estimated that over a quarter of all young child deaths in Africa occur due to malaria as a result of poor housing and sanitation conditions (UNICEF 2016). In Ghana, malaria kills one child in every 30 seconds, and the annual economic burden of malaria is estimated 1-2 percent of the gross domestic product (GDP) (UNICEF 2016).

The geographic distribution of tuberculosis (TB) provides another illustration of how the neighbourhood social characteristics impact health of populations. It is estimated that 98 percent of the world's active TB cases are in developing countries (WHO, 2017). Ghana is a TB endemic country with 14, 632 cases diagnosed and put on treatment in 2015 (Ghana Statistical Service 2017). The concentration of active TB in developing countries is strongly related to poverty. The poor live in conditions of crowded housing, poor sanitation and nutrition, resulting in weakened immune systems, which make them vulnerable to TB. Studies have shown that poverty is a risk factor for contracting TB (Hawker, Bakhshi, Ali, and Farrington, 1999; Elender, Bentham and Langford 1998). As Murdie (2003) puts it, appropriate housing establishes conditions for access to other formal and informal supports and networks, and speeds up the development of a society.

Health is also shaped by relationships. For example, neighbourhoods where residents express mutual trust and are willing to intervene for the public good have been linked with lower homicide rates

(Morenoff, Sampson, and Raudenbush, 2001; Sampson, Raudenbush, and Earl, 1997). Conversely, less closely knit neighbourhoods and more social disorder have been related to anxiety and depression (Ross 2000; Cutrona, Russell, Hessling, Brown, and Murry, 2000; Phongsavan, Chey, Bauman, Brooks, and Silove, 2006). It has been hypothesized that the body's reaction to chronic stress of fearing one's neighbourhood can have a direct biological effect on health by raising blood pressure, which could increase cardiovascular diseases (Soboya, Zimmerman, and Bodanese, 2010; Pan, Cai, Cheng, Dong, An, and Yan, 2015). In addition, perception of fear can have effect on health through reducing the level of physical activity in the neighbourhood (Suminski et al. 2005). Surprisingly, some researchers have found poorer health among disadvantaged individuals living in relatively advantaged neighbourhoods (Robert 1999; Pickett, Collins, Masi, and Wilkinson, 2005; Winkleby, Cubbin and Ahn, 2006), possibly because of adverse psychological effects of feeling worse off than one's neighbours and/or stronger social ties or reduced exposure to discrimination associated with a greater geographic concentration of one's own group (Williams, Mohammed, Leavell, and Collins, 2010).

Besides the direct influence that neighbourhoods have on health, including effects on income, education, employment and social capital, neighbourhoods also indirectly impact health through multigenerational disadvantage (Sharkey and Elwert, 2011; Wayland 2010; Worswick, 2001). That is, parents' childhood neighbourhood characteristics may affect his or her personal experiences in school, employment and income. These aspects of a parent's experience may in turn influence the resources available to his or her children (Sharkey and Elwert, 2011; Feliciano and Ruben, 2005).

Education and health

Education is an important social determinant of health. There are a number of pathways by which education leads to better health. First, it is widely recognized that education can lead to improved health by increasing health knowledge and healthy behaviours; with higher education, people attain more sophisticated skills to evaluate how behaviours they adopt might be harmful or beneficial to their health (Dewalt, Berkman, Sheridan, Lohr, and Pignone, 2004; Sanders, Federio, Klass, Abrams, and Dreyer, 2009; MiKkonen and Raphael, 2010). In addition, they achieved greater ability and more resources to allow attainment of healthier lifestyles (Braveman, Egerter, Williams, and Kawachi, 2011).

Second, education also plays an important role in health by shaping employment opportunities, which are major determinants of economic resources. For example, level of education is highly correlated with other social determinants of health, such as level of income, employment security, and working conditions (Gabel, Levitt, Holve, Pickreign, and Whitmore, 2002; Crissey, 2009; Mensah, 2010). More education has been associated with greater perceived personal control (Mirowsky and Ross, 1998) which has often been linked with better health and health related behaviours (Leganger and Kraft 2003; Mirowsky and Ross, 1998; Mirowsky and Ross, 2003). Third, greater educational attainment is generally associated with higher relative social standing; subjective social status (an individual's perception of his or her ranking in a social hierarchy may predict health even after controlling for more objective indicators of social status (Demakakos, Nazroo, Breeze, and Marmot, 2008). That is, people attain better understanding the world and they become more able to see and influence societal factors that shape their own health.

Conversely, a lack of education in itself is not the main factor causing poorer health. According to MiKkonen and Rapheal (2010), the manner by which education influences population's health is shaped by public policies. They contend that if adequate income and necessary services such as childcare could be available to all, the health threatening effects of having less education would be much less. Finally, more education has been linked with increased social support (Mickelson and Kubzansky, 2003), which is associated with better physical and mental health (Berkman and Glass, 2000). Social support may give people the emotional and practical resources they need to get through life. Social isolation and exclusion are associated with increased rates of premature death, depression, higher levels pregnancy complications and higher levels of disability from chronic illness (Wilkinson and Marmot, 2003; Uchino 2006; Braveman and Barclay, 2009).

Unemployment, working conditions and health

Employment provides income, a sense of identity and helps to structure day-to-day life. Unemployment is related to poor health through various pathways. First, unemployment often leads to material deprivation and poverty by reducing income and recovery benefits that were previously provided by one's employer (MiKkonen and Rapheal, 2010). Second, unemployed people and their families often experience greater psychological and financial problems. They are substantially at increased risk of premature death (Wilkinson and Marmot, 2003; Mensah, 2010; Agyekum and Newbold, 2016). In particular, Khanlou, Koh, and Mill (2008) note that underemployment and unemployment is one of the most significant stressors for mental health that has been identified. Unemployment is a very stressful experience and is linked with low self-esteem, isolation and family conflicts that can subsequently lead to mental health problems.

Continued unemployment may lead to poverty which is linked with poorer nutrition and lower housing standards, fewer educational opportunities and access to quality health care (Bartley, 1994; Pharr, Moonie, and Bungun, 2012; Agyekum, 2016). Again, an unemployed person may adopt unhealthy coping skills, including smoking, alcohol or drug abuse, which may jeopardize health. As a register of the concerns engendered by increased "Tramadol" (pain killer) abuse in Ghana and other parts of West Africa, issues of youth (un)employment and health promotion have become prevalent in the public discourse on health. One can hardly pick up a newspaper, or turn on the television or radio in Ghana without encountering talk about how tramadol and other drug abuse by the youth are threatening the provision of healthcare in the country. The Pharmaceutical Society of Ghana is cautioning the general public particularly, the youth to stop. The problem with such advice is that it is unlikely to change behaviour because the information is widely known (Marmot, 2017). People do not continue to take tramadol, for example, because of ignorance of the devastating health consequences, but for a variety of psychological and social reasons, including stress associated with unemployment, poverty and living in poor neighbourhoods. Simple advice will not work. It is noted that lack of employment is associated with physical and mental health problems that include depression, anxiety, drug abuse and increase suicide rates (MiKkonen and Raphael, 2010; Chen, Li, He, Wu, Yan, and Tang, 2012).

Working conditions are important social determinants of health because of the great amount of time we spend in our workplaces (MiKkonen and Raphael, 2010). Studies have identified a host of work dimensions which shape health outcomes (O'Neil, Forsythe, and Stanish, 2001; Caruso, Hitchcock, Dick, Ruso, and Schmit, 2004). These include factors such as employment security, physical conditions at work place and stress, working hours, and opportunities for self-expression and individual development at work. The physical aspects of work represent obvious pathways through which work influences health. For example, job requiring repetitive movement and/or high physical workload puts workers at high risk for musculoskeletal injuries and disorders (O'Neil, Forsythe, and Stanish, 2001). Also, physical inactive workers in sedentary jobs are at increased risk of obesity and chronic diseases, such as diabetes and heart disease (Warburton, Nicol, and Bredin, 2006). The physical conditions in the workplace such as inadequate ventilation, high noise levels, and hazardous chemical exposures can also harm health. Psychological aspects of work represent another pathway to health. For example, longer and more unpredictable hours, combined with already high and rising job demands are particularly likely to cause stress and anxiety in families where both partners work, and for single-parent families (de Jonge, Bosma, Peter, and Siegrist, 2000; Caruso et al. 2004). Social support at work has also been linked with health (Standfeld, Rael, Head, Shipley, and Marmot, 1997; Stansfeld, Shipley, and Marmot, 1999). Environments facilitating mutual support among coworkers may buffer against physical and mental health stressors (Kuper, Singh-Manoux, Siegrist, and Marmot, 2002).

Work-related opportunities and resources can also influence health. Research evidence has also shown that imbalances between demands (e.g., time pressure, responsibility) and reward (e.g., salary, respect from supervisors) often lead to significant health problems (MiKkonen and Raphael, 2010). When workers perceive that their efforts are not being adequately rewarded; they are more likely to develop a range of physical and mental afflictions. Socially disadvantaged groups are more likely to have health-harming physical and psychological working conditions, along with disadvantaged living conditions associated with lower pay (Egarter, Dekker, An, Grossman-Kahn, and Braveman, 2008).

Income, wealth and health

The relationship between income, wealth and health can be studied at two different levels. First, it is obvious how health is related to the income that an individual or family receives. Second, we can observe how income distribution across the population is related to health of the population. Lynch, Kaplan, Pamuk, Cohen, Heck, Balfour, and Yen (1998, p. 1074), reported that the loss of life from income inequality in the United States “is comparable to the combined loss of life from lung cancer, diabetes, motor vehicle crashes, human immunodeficiency virus (HIV) infection, suicide and homicide in 1995.” It is observed that more equal income distribution has shown to be one of the best predictors of better overall health of society (Marmot, 2017; Wilkinson, 1996). Deaton (2003, p.14) argues that many of the arguments that income inequality is a health risk are as plausible for poor as for rich countries. Studies have shown that low income predisposes people to material and social deprivation (Daly, Duncan, McDonough, and Williams, 2002; Avendano and Glymour, 2008; Braveman, Egerter, Williams, 2011). The greater the deprivation, the less likely individuals and families are able to afford the basic prerequisites of health, such as food, clothing, and housing. (MiKkonen and Raphael, 2010). Deprivation may also lead to social exclusion. Social exclusion denies people the opportunity to participate in activities normally expected of individuals in their communities. Poverty and social exclusion increase the risk of divorce and separation, disability, illness, addiction and social isolation (Brunner, 1997; Dunn and Dyck, 200; Bartley and Plewis, 2002).

Absolute poverty (not being able to access basic resources such as food and shelter) has a profound effect on health. People living on the street suffer the highest risk of premature death (MiKkonen and Raphael, 2010). This is evident on a global scale where most of the disease burden in low-income countries is rooted in poverty, poor nutrition, indoor air-pollution and lack of access to proper sanitation among other factors. The World Health Organization estimates that diseases associated with poverty account for 45 percent of the disease burden in the poorest countries (Stevens, 2004).

Continuing anxiety, insecurity, low self-esteem, social isolation and lack of control over work and home life have powerful effects, especially on the cardiovascular and immune systems. Individuals experiencing long-term stress are more vulnerable to conditions such as infections, diabetes, high blood pressure, heart attack, stroke, depression and aggression (Wilkinson and Marmot, 2003). In sum, there is a final cost to income inequalities in societies.

Reverse causation (income loss due to poor health) occurs but does not only account for the observed association of income, wealth and health (Muennig, 2008; Kawachi, Subramanian, and Kim, 2008). Several longitudinal studies reveal that economic resources predict health or its proximate determinants, even after adjustment for education (Daly, Duncan, McDonough, and Williams, 2002; Herd, Goessling, and House, 2007; Avendano and Glymour, 2008). Income inequality (measured at an aggregate level) has often been linked with health (Wilkinson and Pickett, 2006), although a causal link is debated (Lynch, Kaplan, Pamuk, Cohen, Heck, Balfour, and Yen, 2005). Income inequality could affect health by eroding social cohesion (Kawachi and Kennedy, 1997). Social cohesion defined as the quality of social relationships and the existence of trust, mutual obligations and respect in communities or in the wider society helps to protect people and their health (Sampson, Raudenbush, and Earls, 1997). Societies with high levels of income inequality tend to have less social cohesion and more incident crime.

Other factors deserve to be mentioned, including gender, colonialism and religion. Unlike the other factors, these factors are not direct social determinants of health. Rather, their effects on health arise from social exclusion, discrimination and oppression that are attached to those identities that are associated with poor health and health outcomes. Throughout the world women experience more adverse social determinants of health than men. This is because women carry more responsibilities for raising children and taking care of housework (MiKkonen and Raphael, 2010). Women are also less likely to be working full-time and are less likely to be eligible for unemployment benefits. In addition, women are employed in lower pay jobs and experience more discrimination in the workplace than men (Choudhury, 2014; Agyekum, 2016). In most societies, other concerns of gender inequality involve the lack of affordable and high quality daycare (MiKkonen and Raphael, 2010). This forces women to stay at home more and take care of family responsibilities. Providing affordable childcare would increase women’s chances to participate in working life.

Another important factor that has been recognized as a root cause of most health disparities among populations is colonialism (Czyzewski, 2011). Colonialism orchestrates the processes that lead to systematic racism and cultural genocide (assimilation processes that interrupted culture, language, family ties and communities) essentially puts control in other people's hands that have consequences for their social determinants. For example, Turshen 1984, using examples from the impact of colonialism and capitalism on health and health services in Tanzania, has criticized research approaches that separate illness and health from colonial struggles.

In terms of religion, (defined by Koenig "as a multidimensional construct that includes beliefs, behaviors, rituals, and ceremonies that may be held or practiced in private or public settings, but are in some way derived from established traditions that developed over time within a community," 2012, p.2) a considerable number of studies have now reported that religious involvement is related to greater longevity, fewer death rates from heart disease and fewer complications and better survival after surgery (Koenig, King, and Carlson, 2012). Again, it is widely known that stress and anxiety can compromise health and wellbeing. Religion can provide coping activities, including praying to God (The Supreme Being) to change a situation or to give emotional strength; reading inspirational scriptures for comfort or relief of anxiety (Koenig, 2012; Agyekum and Newbold, 2016). In liturgy and hymns sung during religious services, which include themes having to do with joy, peace, confidence, overcoming adversity and other positive health consequences of having triumphed over evil forces are examples (Koenig, King, and Carlson, 2012). Conversely, religion, which can help reduce anxiety, can also cause it. This is because many religious beliefs are at odds with scientific knowledge. It is increasingly reported that people refuse medical treatment or deny the rights of children to receive medical care because it is believed to be prohibited by their particular faith, or because they believe that seeking medical care instead of relying on God to answer prayers for healing would be a lack of faith in God (Koenig, King, and Carlson, 2012). Devoutly religious persons may have high expectations of themselves and of others (Koenig, King, and Carlson, 2012; Agyekum and Newbold, 2016). They may condemn themselves for having difficulties that they think religious people should not have. Other negative effects associated with religion are authoritarianism, prejudice, alcoholism, and religious abuse. Despite the negative effects of religion on health, religion is said to reinforce feelings of hope, optimism, self-esteem, belongingness, and identity (Ebaugh and Chafetz, 2000; Mazumdar and Mazumdar, 2009; Mensah, 2009). These together can be a psychological resource for many people. It is increasingly known that people do not turn to religion for religion sake, rather, provides avenues for friendships, romantic relationships, social groups, and personal and cultural investments (Krause, 2008; Lim and Putnam, 2011).

DISCUSSION

The social determinants of health concept has provided a useful framework for examining the major components of disparities in health. The concept underscores and illuminates the importance of the social, cultural and economic factors underpinning health and health-related outcomes. Through this concept, we come to understand that the primary factors that shape the health of populations are not medical treatments or lifestyles choices, but rather the living conditions they experience. We can promote health of the people through the enactment of public policies that provide the living conditions necessary for good health. Adult education centres in our communities and corporate organizations should focus on educating the public especially adults who have no or minimal education about the social determinants of health and promote public policy action. In addition, adult literacy centres and organization should raise these issues with agencies, organizations, and institutions whose mandates include promoting health and preventing illness.

Working on the frontlines of the adult education, adult educators see the impacts of the social determinants of health of their students or clients every day. Adult educators often find links between their students/clients and issues such as low income, high levels of stress, and job insecurity. Good health involves reducing levels of educational failure, reducing insecurity and unemployment, and social isolation. Even if people, particularly adults do know about these issues, adult educators need to re-emphasize them, particularly individual risk factors. Our system is really about sick care, not health care. Research and campaign should focus on the identification of social, cultural, and economic factors that affect populations' health. We should not forget that we are not an egalitarian society, but, in fact, some groups such as women and children face substantial economic and social barriers that have significant impacts on education and

health. Confronting these issues is a big challenge that involves addressing some of the most fundamental values. For example, providing national affordable high quality childcare programs would provide opportunities for women to engage in education and improve their employment situations; improving access to employment insurance for part-time workers would assist women to combine education and work; interventions to reduce and protect women and adults from discrimination in schools, in workplaces and in the community, will help people feel valued and supported in more areas of their lives and contribute to their health, especially their mental health; a strong food culture for health, especially through school education, to promote knowledge of food and nutrition.

Adult educators can play an important role to address social determinant of health by working on their individual practices, helping to reorient the education system, and advocating for healthy public policies. Adult educators should include questions on social determinants of health – for example, income, housing, food security, and social support in their lesson plans and assessment of students. Again, educators should look at how structural issues of class, race, gender and place affect the way in which populations experience health problems, and develop initiatives that address these issues. Adult educators should take the lead in developing this intrinsically social concept, which has a wide applicability to health and other disciplines. Indeed, the social, cultural and economic environments in which people live, work and play have a huge influence on health.

CONCLUSION: Addressing the knowledge gaps

The gaps in knowledge reflect several challenges. A methodological limitation of the current analysis is that it is cross-sectional. What would be required to assess the influence of social and economic factors on populations is a longitudinal study design allowing for temporal changes to be assessed. Illustration of social and economic characteristics used in surveys may be useful predictors of health status for some cultures and not for others. The social determinants of health of populations in poorer or primitive societies may be even more contingent and complex than what has been suggested. For example, in cultures where people are stigmatized because of accusation or perception of ‘witchcraft’ (in the case of most developing countries) may present a number of special complexities that do not exist for other cultures. Individuals perceived or categorized as such may experience discrimination that affects their social and/or economic participation. These contradictions and contingencies cannot typically be sorted out with any survey data. Cultural specific studies need to be explored. This will require more theoretical development, not necessarily more empirical work (Dunn and Dyck, 2000).

Despite growing advocacy that discrimination is a key determinant of health (e.g., Krieger and Sidney, 1998; Hyman, 2009), explicit examinations and understandings of experiences and effects remain surprisingly limited with respect to the unique experiences of vulnerable groups that may experience multiple, intersecting forms of discrimination not solely attributed to poverty or gender roles. This gap is critical in developing societies given vulnerable groups represented a chunk of the total population in almost every society. The paucity of research explaining how discrimination affects vulnerable groups’ health and health-related services undermines the world’s mandate of universal health-care access, the reduction of social inequalities and comprehensive understandings of population health patterns and conditions across the world.

The review also finds a dearth of African research on specific cultures’ health, documenting socio-demographic and socio-economic trends. Relatively little has been done to describe the impact of health status of marginalized groups’ employment, income, education, family structures, and living conditions. Descriptive studies show evidence of poor health, whereby the poor or the marginalized in society are more likely than the wealthier or the privileged populations to have chronic conditions or disability (Dunn and Dyck, 2000; Wilkinson and Marmot, 2003; Agyekum and Newbold, 2016). Current measures do not fully capture or address the distinct relevant aspects of education, employment and income. For example, the observed effects of education and employment on adult and youth’s health suggest a potential role for unmeasured social influences. For example, socio-demographic and socio-economic effects on drug abuse (such as the incidence of tramadol abuse in most African countries) have not been deeply explored. Development of better measures of these influences is in its infancy.

Notwithstanding the above insights on existing social determinants of health, and the mediating role of socio-cultural and economic context(s), existing knowledge remains incomplete, complex, and in need of further empirical analyses, validation and theoretical development, especially within different cultures and societies. This requires multiple methods including large-scale quantitative surveys and longitudinal analyses, in addition to in-depth qualitative approaches. Consequently, this paper ensures the strategies to be followed for adult education success, which will have direct benefits not only for adult educators but also for society in general.

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