Review

A critical review of the occurrence of depression among married Asian female immigrants in South Korea

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Married Asian female immigrants’ mental health issues, particularly depression in relation to acculturation is becoming a serious problem in the republic of Korea. The country is transitioning from a homogenous society to a multicultural country. This transition can be attributed to the large number of females from other Asian countries married to Koreans; with over 85% of foreign spouses being women. When these married female immigrants arrive in Korea, they have to learn a new language, a new culture and change their diet. The acculturation experience is often associated with a high prevalence of depression among these women. From literature written in English, an analysis was made to determine whether acculturation factors had a greater impact on the occurrence of depression among married Asian female immigrants compared to social determinants of health. Due to the pattern observed from this analysis, policies were recommended for future consideration by relevant bodies.

Keywords: Immigrant women; acculturation; depression; critical review; Asian women, Korea.

INTRODUCTION

Depression is a mood disorder characterized by feelings of self-condemnation, sense of guilt, worthlessness, concern and glumness revealed due to a severe level of sadness felt during an extended period of time (Hyung-Chul et al. 2015; Park et al. 2016). It is the leading cause of global disability affecting nearly 350 million people worldwide with women more likely to be depressed (Antoniades et al. 2014; Hwang et al. 2005; Weissman et al. 1996). In The Republic of Korea (Korea), depression is becoming a serious public health problem mostly associated with acculturation among Asian immigrant women (Choi et al. 2012; Hyung-Chul et al. 2015). However, a legitimate question that could be asked is whether acculturation factors have a greater impact on the occurrence of depression among married Asian female immigrants compared to social determinants of health. This comparison will allow researchers and policymakers to focus on critical factors affecting the mental health of female immigrant women in Korea. Is the high occurrence of depression among these women mostly due to acculturation or other social determinants of health? Korea is transitioning from a homogenous society to a multicultural country (Im et al. 2014; Jun and Ha 2015; Kim et al. 2013b). The country was known for its large-scale emigration, however it has recently emerged as a popular destination for immigrants (Im, Lee and Lee 2014; Kim 2015). For the first time, it is estimated that three out of every 100 individuals in Korea originated from a foreign nation (Doo-Sub 2014; Jun and Ha 2015). Migrant workers are the largest group, followed by immigrants married to Korean spouses (Jun and Ha 2015); with over

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85% of foreign spouses being women (Doo-Sub 2014; Im, Lee and Lee 2014; Jang and Kim 2012; Jun and Ha 2015; Jun et al. 2014; Kim, Park and Windsor 2013b). These women are mainly from China (52.8%), Vietnam (24.1%), the Philippines (5.1%), and Japan (4.1%) (Choi 2015; Im, Lee and Lee 2014; Jun and Ha 2015; Kim et al. 2015). It is common knowledge in Korea that these women engage in international marriages for economic reasons (Kim, Park and Windsor 2013b; Panuncio and Bae 2012a). On the other hand, these international marriages help to curb the problems of low birth rate (Jun, Hong and Yang 2014), aging population (Im, Lee and Lee 2014) and the reluctance of Korean women to marry bachelors living in the rural areas (Hyung-Chul et al. 2015; Jun, Hong and Yang 2014) predominant in the country. As these married female immigrants arrive in Korea, they have to learn a new language, a new culture, and oftentimes change their diet. In sum, they experience acculturation.

Acculturation is a process through which foreigners adopt the customs of a host country (Abraido-Lanza et al. 2006; Eamranond et al. 2009; Moran et al. 2007; O’Brien et al. 2014; Obiang-Obounou 2015; Okafor et al. 2013; Rodriguez et al. 2012; Sam and Berry 2010). The process of adapting to the host country is often stressful (Berry 1997; George et al. 2015) and contribute to mental health problems (Hyung-Chul et al. 2015; Jun, Hong and Yang 2014); more specifically depression among married female immigrants in Korea (Hyung-Chul et al. 2015; Im, Lee and Lee 2014; Kim et al. 2015). Almost 1 in 10 (9.7%) of Asian married female immigrants are depressive, a rate that is two to threefold higher than in the general Korean population (2.9-6.7%) (Jun, Hong and Yang 2014; Kim and Kim 2013; Park et al. 2016). Researchers’ measures of acculturation often include duration of residence, age at migration, ability to speak the host country’s language and dietary habits, among others (Eamranond et al. 2009; Vaeth and Willett 2005; Wilkinson et al. 2005). As for the acculturation factors associated with depression, multiple studies reported that immigrants’ health deteriorates with the inability to speak the host country language (Lee et al. 2013; Moran et al. 2007; Okafor et al. 2013), duration of residence (Frisbie et al. 2001; Goel et al. 2004; Lee et al. 2013; Moran et al. 2007), age at immigration (Gubernskaya 2015; Moran et al. 2007) and diet (Lee et al. 2013; Sarwar et al. 2015; Vargas and Jurado 2016).

The social determinants of health are the conditions in which people are born, grow, live, work and age (WHO). The social determinants of health are responsible for health inequities and are often defined as factors that contribute to a person’s current state of health (Hoffman et al. 2016). Scientists generally recognize five determinants of health of a population. These are the biological, socioeconomical, psychosocial, behavioral and social determinants (Prevention). For this critical review, the focus was on social environment (discrimination, income, and gender) and health services (access to quality health care and having or not having health insurance).

Following the introduction, I provide details on the methods used in the review. Section three discusses the findings of this review. Finally in section four, I make recommendations on future research and public health policies. For the purpose of this review, the conceptual framework was constructed on the basis of the existing literature associating acculturation stress with depression and social determinants of health (Figure 1).

METHODS

The review focused on original research papers investigating the occurrence of depression among
immigrant women married to Korean men. Papers were identified using Pubmed, ScienceDirect and Google Scholar journal databases. The key words used for the search in terms of inclusion and exclusion criteria are given in Table 1.

130 potential records were identified (Figure 1). After removing duplicates, reviewing titles and abstracts, 35 records were retained for further assessment. These titles, keywords, abstracts and full-text written in English were then reviewed to assess suitability for inclusion in accordance to the inclusion and exclusion criteria. Eight records were included in the final analysis.

RESULTS AND DISCUSSION

Study characteristics

Of the 8 studies, four were on acculturation and depression and four on social determinants of health. Three studies used a cross-sectional design, two on survey research, two and one used descriptive and behavioral model respectively (Table 2).

Characteristics of the studies’ participants

The major ethnic groups represented in the studies were Chinese and ethnic Koreans that were living in China, but currently live as foreign residents in Korea, followed by Vietnamese and Filipinas. Most studies focusing on acculturation and depression among foreign women married to Korean men specified that these women, mainly from other Asian countries, came to Korea for marital and economic reasons. No study investigated health outcome of western women married to Korean men.

Acculturation factors

Korean language proficiency

Married Asian female immigrants’ mental health issues; especially depression in relation to language is a serious problem in Korea. These women, in pursuit of happiness and economic security, engage in international marriage migration with limited or no knowledge of the Korean language. During the acculturation process, learning a new language can become a source of stress (Bernstein et al. 2011) leading to mental health problems (Greenland and Brown 2005) more specifically depression. Researchers found a positive correlation between the Korean language proficiency and depression among married Asian female immigrants (Kim et al. 2013a; Kim and Kim 2013). However, the focus of these studies was on women living in Seoul metropolitan area while multiple reports showed that the majority of them live in rural and low income places (Hyung-Chul et al. 2015; Kim and Kim 2013). It is likely that language and community centers will be more present in cities than in rural places. Another study showed no association between Korean language and depression (Hyung-Chul et al. 2015). In addition, the study focused on Chinese multi-cultural families in Incheon; part of the Seoul metropolitan area.

The Chinese represent 52.8% of the foreign population in Korea (Doo-Sub 2014; Im, Lee and Lee 2014); giving this community a better sense of organization and less acculturation stress. Furthermore, the sample used for the study is from Chinese and ethnic Koreans that were living in china but are now living in Korea among foreign residents. Foreign wives with greater Korean speaking proficiency tend to adapt themselves more successfully (Doo-Sub 2014), which in turn, leads to a better mental health. These reports are in agreement with previous studies associating greater language proficiency with better health (Okafor et al. 2013; Patel et al. 2003) and consequently a lower prevalence of depression (Im, Lee and Lee 2014; Mui and Kang 2006). It is important to note that most language centers are located in urban places while most of these women live in rural places; leaving the responsibility of the mother-in-law to teach them the culture and the language (Chung and Lim 2011). I discussed later the relationship between the new bride and her mother-in-law (section 3.2.2.1).

Table 1. Search strategy and section.

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
<th>Resources searched</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written in English</td>
<td>Articles in Korean language, Book chapters</td>
<td>PubMed</td>
</tr>
<tr>
<td>Focused on health of married immigrant women in Korea</td>
<td>Reviews, Conference and poster abstract, Thesis and meta-analysis studies</td>
<td>Google Scholar</td>
</tr>
<tr>
<td>Publication dates between 2005 and 2016</td>
<td></td>
<td>ScienceDirect</td>
</tr>
</tbody>
</table>
Table 2. Papers included in review.

<table>
<thead>
<tr>
<th>Study</th>
<th>Data collection</th>
<th>Design</th>
<th>Sample size</th>
<th>Association with depressive symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acculturation stress</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kim et al. (2013) [39]</td>
<td>Not specified</td>
<td>Cross-sectional</td>
<td>223</td>
<td>Positive for language. No association with duration or residence and age at immigration</td>
</tr>
<tr>
<td>Kim et al. [14]</td>
<td>June - July 2009</td>
<td>Cross-sectional</td>
<td>316</td>
<td>Positive with diet (meal skipping)</td>
</tr>
<tr>
<td><strong>Social determinants of health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panuncio and Bae (2012) [40]</td>
<td>Unknown</td>
<td>Descriptive and qualitative</td>
<td>10</td>
<td>Positive with income and discrimination</td>
</tr>
<tr>
<td>Im et al [8]</td>
<td>April 30, 2010 - June 2010</td>
<td>Survey Research</td>
<td>501</td>
<td>Positive with economic status, marital satisfaction, social support and duration of residence</td>
</tr>
<tr>
<td>Jun et al [12]</td>
<td>Unknown (8 weeks)</td>
<td>8 week interventions: Cognitive behavioral model</td>
<td>43</td>
<td>Psychological adaptation improvement program reduced depression in rural areas</td>
</tr>
<tr>
<td>Chae et al. (2014) [41]</td>
<td>Unknown</td>
<td>Descriptive and survey</td>
<td>216</td>
<td>Promoting the health-related quality of life reduces depression</td>
</tr>
</tbody>
</table>

**Duration of residence**

Contrary to previous reports elsewhere (Gonidakis et al. 2011; Tran et al. 2007), the duration of residence was not associated with the occurrence of depression among married Asian female immigrants in Korea (Hyung-Chul et al. 2015; Im, Lee and Lee 2014; Kim et al. 2013a; Kim and Kim 2013; Kim et al. 2015). The higher prevalence of depression observed could be associated with other psychosocial factors such as self-esteem, social support and marital satisfaction. Multiple reports associate the length of residence with mental health problems; supporting the hypothesis that depression levels tend to be high during the first decade of initial resettlement (Bernstein et al. 2011; Madianos et al. 2008; Tran, Manalo and Nguyen 2007). However, the length of residence of the women investigated was relatively short with a mean length of 3.8 years compared with 15.92 years of residence in the US (Choi et al. 2008; Kim et al. 2013a). Residing in a country for a long time allows a better integration and/or assimilation in some cases as the individual has had the time to learn the language, the culture and build friendship.

**Age at immigration**

Reports also linked depressive symptomatology to age at immigration, especially in older adult immigrants (Kuo et al. 2008). Other studies indicate that Chinese Americans between the ages of 50 and 65 years were at greater risk (than Chinese Americans between the ages of 18 and 29 years and 30 and 49 years) of experiencing a lifetime major depressive episode (Hwang et al. 2005; Takeuchi et al. 1998). In Korea, the age of Asian female immigrants married to Korean men is not associated with occurrence of depressive symptoms (Hyung-Chul et al. 2015; Kim et al. 2013a; Kim and Kim 2013; Kim et al. 2015). These women are relatively younger (mid 30s) when compared to Latinas (Gonzalez et al. 2001; Sternberg and Lee 2013) or other women immigrants of Mexican descent in USA (Gerst et al. 2010; Gonzalez, Haan and Hinton 2001).

**Dietary Acculturation**

While acculturation pertains to cultural change or adoption of the beliefs and behaviors of another group (Obiang-Obounou 2015; Sam and Berry 2010), dietary acculturation is a process by which minority groups adopt the dietary practices predominant in their new environments. Culture-based food habits are often the last practices people change through acculturation (Kittler et al. 2008). It’s possible that the lack of availability of...
native ingredients may force immediate diet change. Unhealthy diets are often adopted resulting to health risks (Ro 2014) such as depressive symptomatology (George et al. 2015; Ponzo et al. 2006). Another observation is the abstinence from eating. Missing meal(s) could lead to malnutrition (undernutrition) and consequently to food insecurity. Kim et al. observed that those Asian married female immigrants who missed meals at times had nearly three times higher probability of developing a depressive disorder than those who rarely did (Kim et al. 2015). The authors attribute it to the lack of dietary acculturation. Other reasons include lack of understanding of Korean culture, lack of access to food from one's home country, low income level, and stress induced from cultural adaptation (Hwang et al.; Kim et al. 2015).

Social determinants of health

Social environment

Discrimination and economic status

Discrimination experienced by foreign women married to Korean men is often associated to their inability to speak Korean (Doo-Sub 2014). However, questions remained regarding the association of racial discrimination and the inability to speak Korean. Korea’s national identity is narrowly defined and is associated with their homogeneity (Lim 2003). Prejudice against immigrant women can have a negative effect on the quality of their marriage and subsequently the willingness to adapt and learn the host country culture and language. If acculturation factors such as duration of residence, age at immigration don’t seem to have a negative impact in the mental health of these women, other social determinants of health need to be taken into consideration. Another gap in existing scholarship by existing research is the Korean attitude towards newcomers in Korea. According to Jung (Jung 2012), a xenophobic attitude and restrictionist sentiment among Koreans towards foreigners is present despite the willingness of the government to incorporate immigrants and adopt multiculturalism as a way to respond to the growing visibility of immigrants and their cultures (Jun and Ha 2015; Kim 2015). Economic gain is reported to be the primary reason why Asian migrant women got married to Korean men (Kim, Park and Windsor 2013b; Panuncio and Bae 2012a). However, the search for a better life often ends in disappointment as they experience intense financial strain. In a study comparing marital satisfaction between immigrant wives (n=409) and Korean wives (n=474) of Korean men, Chung reported that the household income of interethnic/racial couples was lower than Korean couples (Chung and Lim 2011). In a large and diverse study investigating the association of acculturation and mental health among the married migrant women in Busan, Im et al. (Im, Lee and Lee 2014) indicated that women who rated their economic status higher were more likely to have better mental health.

Gender, marriage satisfaction, and women labor force participation

Are women more susceptible to develop depressive symptoms? It has been reported that due to the fear of foreign wives running away, Korean husbands and family members often prevent immigrant women from leaving...
the house and control their social activities (Chae et al. 2014). Rural areas in Korea have stronger traditional values such as the male-centered family structure where women are being forced to obey their husbands rather than being supported by them (Jun, Hong and Yang 2014). This critical behavior often leads to domestic violence (Choi 2015) may play a role in the occurrence of depression among these women. Marital satisfaction influences mental health (Im, Lee and Lee 2014) and could be the main reason these women are leaving their Korean husbands. In addition, the lack of labor force participation could also play a role in marital satisfaction. Female labor force participation and gender equality issues have recently been at the center of controversy in Korea (Lee et al. 2008). The issue is not peculiar to married immigrant women and/or their inability to speak Korean but to Korean married women in general. Lee et al. (Lee, Jang and Sarkar 2008) identified three factors affecting the employment of married women. First, the traditional Korean societal norm where employment in white-collar jobs is ‘acceptable’ while blue-collar jobs are deemed unsuitable for married women. Second, Korean society ‘stigmatize’ the husbands of women who work as blue-collar workers. Finally, labor force participation of married women remains low as the high opportunity-cost of working away from home (such as childcare costs) is too high to be adequately compensated for by the low wages of available blue-collar jobs.

**Physical environment**

**Living with the mother-in-law**

Kim et al. stated that the most problematic area for the Korean husbands was the relationship between mother and daughter-in-law, because any problems with this relationship required the men to become mediator(s) (Kim, Park and Windsor 2013b). The mediation is necessary in order for the Korean males to maintain their families. Conflicts are common between foreign wives and parents-in-law mainly because the husband’s parents have a great influence on and a close relationship with the husband. Also patriarchal custom thrives (Jang and Kim 2012). However, living in in-laws is uncommon in most of these women’s culture. Chung reported that 25.2% of immigrant wives live with Parents in-law compared to 14.3% for Korean wives married to Korean men (Chung and Lim 2011). Researchers should investigate the relationship between marriage satisfaction, living with in-laws and the occurrence of depression among foreign women married to Korean men. It should be noted that this controversial decision is unpopular among Koreans but imposed on migrants to speed up the assimilation or integration process (Chung and Lim 2011). Different studies confirmed that married immigrant women living with their husband’s families had higher levels of depression compared with women living with only their husbands (Kim et al. 2013a; Kim, Park and Windsor 2013b; Kim and Kim; Kong 2009). While the intent is to help the immigrant women to easily adapt to their new environment, living with the mother-in-law creates more mental health problems as shown by the level of depression found to be higher than that of the population of Korean women.

**POLICY DIRECTIONS AND CONCLUSION**

**Korean language, Food and culture training**

Most of the international marriages usually take place through marriage agencies, thus husbands and wives are often strangers to each other (Panuncio and Bae 2012a). The inability to speak the host country’s language is detrimental to these women. The Korean government should encourage marriage agencies to offer a minimum of 6 months to one year of Korean language training to these women prior to their getting married. Having limited Korean language proficiency decreases the opportunities for these women to acquire new skills necessary for labor force participation and consequently lowers their self-esteem. Lower self-esteem is associated with depression (Jun, Hong and Yang 2014). Culture refers to the learned, shared, and transmitted knowledge, values, beliefs, and ways of life of a particular ethnic group that make up its identity(Ahn 2012). Food as self-identity satisfies both emotional and physical needs. Programs promoting both cultures will be beneficial for the interethnic/racial couples, in addition to counselling centers used as a tool for strengthening their marriages. These programs will be particularly beneficial for Korean husbands who do not want marriage failure or be part of statistics about absconding wives. In addition, rural Korean men should not stick to their patriarchal gender roles rather develop a balanced power relationship with their spouses. A balanced power relationship maintains the family together when husbands provide wives with responsibility and authority by supporting efforts to maintain their wives identities, and by supporting the role of their wives within the family (Kim, Park and Windsor 2013b; XU and LAI 2002).

**Integration versus Assimilation policy**

While the number of women migrating to Korea for the purpose of marriage continues to increase, it appears that current policies don’t allow a smooth integration of these women. These women are coming from different nations and consequently different cultures. Filipinas for example do not share the Confucian culture present among ethnic Koreans from China or native Chinese. Future research should be country-specific in order to implement policies that will facilitate the acculturation of the married female immigrants. Some researchers recommended a social capital policy as a way to facilitate their assimilation processes (Jun and Ha 2015). This approach is contrary to the Korean government willingness to adopt multiculturalism. A multiculturalist country means that the cultural diversity is acceptable.
and the citizens are free to keep their own culture. While it is expected of the interethnic/racial child to fully assimilate to the Korean culture, new mechanisms are necessary to allow the adult women to keep their own culture while embracing the host country customs. A “migrant married women integration policy” is necessary.

The integration perspective in Canada has become legislated in a multiculturalism policy that encourages and supports the maintenance of valued features of all cultures for those who would like to retain them, and at the same time supports full participation of all ethnic-cultural groups in evolving institutions of the larger society (Berry and Kalin 1995).

**Spouse General and Mental Health policy**

It is reported that immigrant wives have limited access to health care services and support due to language barriers, financial difficulties, lack of adequate information and insurance coverage (Kim et al. 2010). As of 2010, 171 Multicultural Family Support Centers are operated by the Korean government (Ahn 2012). Maternal and childcare are delivered to immigrant women and their children. However, these women, if younger than 40 years old are not eligible for the national health examination program which is offered free-of-charge by the National Health Insurance cooperation (Kim et al. 2010). Due to financial constraints, it is estimated that only 16.2% of immigrants wives utilized medical services (Panuncio and Bae 2012b) and almost a quarter of migrant wives (23%) are often left out of the National Health Insurance (Kim et al. 2010).

Policies allowing these women the same health benefits as their spouses are necessary to prevent the higher prevalence of depression. The concern is both a public health issue as well as a human right problem. Jun et al. conducted and developed a psychological adaptation improvement program for married migrant women and observed a significant increase in self-esteem and decrease in depression (Jun, Hong and Yang 2014). The researchers associated the decrease in depression to the presence of mental healthcare experts during the eight weeks of intervention.

**Qualification and Skills Recognition Policy**

Migrant married women should be welcomed in Korea as part of immigration policy that value skilled workers with the potential to contribute to the country’s economic growth. Unlike students, migrant workers or professionals, these women are probably the country’s best investment among its foreign population as they come to Korea to become part of a Korean family and thus are expected to stay in the country permanently (Jun and Ha 2015). Despite Korea’s economic growth during the past 40 years, married women are still at a disadvantage in the labor market compared to single women and, not because of productivity (Lee, Jang and Sarkar 2008). The observation is of concern especially for immigrant women coming to Korea with their Korean spouses being the principal reason. It relegates women to the status of dependents, creates feeling of ungratefulness when they decide to leave their abusing spouses and devalues their occupation and qualifications. The government needs to create policies that allow the recognition and application of the skills of these migrant women in the Korean job market. Korea should enable self-assessment from a database that will allow these women assess their own credentials (Iredale 2005).

**Concluding remarks**

Korean language proficiency seems to be the main factor associated with depression among foreign women married to Korean men (Choi 2015; Kim et al. 2013a; Kim and Kim 2013). Foreign wives with a great ability to speak Korean adapt more successfully to their married lives, which in turn, leads to less mental health problems (Doo-Sub 2014). However, even though 9% of the immigrant married women married to Korean men come from Canada and the United Sates (Choi 2015), literature does not mention cases of depression among these women. This is in agreement with Berry stating that researchers often presume to know what acculturating individuals want; therefore they “pathologies” the experience by imposing their own ideologies rather than learn about culturally rooted individual preferences and differences (Berry 2003). On the other hand, the refusal of educated Korean women to get married to farmers could be the same for Canadian and US immigrant women whose preferences are educated Korean men with a good command of the English language. Therefore language or the Korean culture does not seem to be an issue; consequently the absence of depression. Furthermore, as most of the immigrant women married to Korean men come from other Asian countries, the assumption is that intra-continental cultural tolerance and adaptation will be easier than inter-continental cultural understanding. However, it appears that the higher prevalence of depression among these women could not be mainly attributed to their inability to speak Korean or their understanding of Korean culture. The relationship between acculturation factors and depression is complex as other factors such as stress related to transitioning and adapting to a new environment play a major role. Other social determinants of health such as discrimination and socioeconomic factors must be taken into consideration. Depression among foreign wives married to Korean men seems to be existing only among a special social group; Korean farmers married to South Asian women with low social and economic backgrounds.

**Limitations**

I reviewed articles written and published in English only. However, most publication investigating the association...
of acculturation and depression among married female immigrants in Korea are written in Korean. While depression is a major health problem, it is possible that immigrant wives suffered from other diseases associated with acculturation such as diabetes, hypertension, heart disease, etc. In addition, studies focused on large metropolitan cities such as Seoul and Incheon while it is reported that these immigrant married women are mostly married to Korean farmers living in rural and low income places (Hyung-Chul et al. 2015; Kim and Kim 2013). In addition, these married migrant women in rural areas experienced more severe domestic work-related and acculturative stress, poorer quality of life, lower self-esteem, and worse mental health problems such as depression, compared with those in urban areas (Jun, Hong and Yang 2014).

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Conflicts of Interest

The authors declare no conflict of interest.

REFERENCES


Prevention Cfdca. 2014. "NCHHSTP Social Determinants of Health ".


