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APPLICATION OF THE HEALTH BELIEF MODEL IN COLLECTIVIST CULTURES: CONCEPTUAL FRAMEWORK TO DESIGN EDUCATIONAL INTERVENTION FOR OBESITY PREVENTION

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Abstract

The high prevalence of obesity reported for collectivist communities prompted the need for culturally relevant programmes for obesity prevention. The differences in cultures based on the value system shared by various groups could be identified based on five cultural dimensions (Hofstede, 1996): collectivism versus individualism, femininity versus masculinity, long-term versus short-term orientation, power distance, and uncertainty avoidance. Research has shown that the individualism and collectivism dimensions account for most of the variance in global differences. There are few studies on healthy eating determinants in collectivist communities. The use of Health Belief Model (HBM) to identify weight-related beliefs in collectivist cultures can be effective for developing obesity prevention programmes.

Key words: obesity, prevention, culture, collectivism dimension, Health Belief Model

Introduction

In the last decade, the prevalence of obesity has risen all over the world. In Romania, recent studies reported that in 6- to 19-year-old children, the prevalence of overweight status (including obesity) was 28.3% (11% obesity) using World Health Organization (WHO) criteria (Chirita-Emandi et al., 2016). The increasing rates of overweight among Romanian children are attributable to frequent consumption of high-fat, low intakes of fruits, and sedentary lifestyles (Mocanu, 2013). Unhealthy eating behavior needs more research that identifies the weight related beliefs of the Romanian population. These beliefs can serve as the basis for designing educational interventions to adopt lifestyle behaviors. The WHO recognizes the impact of the cultural dimension on public health, but despite the importance of the cultural factor, the idea that food cultures could have a positive impact on health and weight does not seem to have been implemented (Hedegaard, 2016).

In Europe, traditional food culture as protective of health is frequently absent in public health initiatives or they are reduced into rather trivial statements of people eating differently in different parts of Europe or in different ethnic groups (Hedegaard, 2016). Undoubtedly, there are differences in food patterns different nationalities. These differences are rooted in cultural practices maintained over time in each region or among specific groups, others are influenced by rising globalization.

The relationship between various cultures' eating beliefs and the prevalence of obesity should serve as a basis for effective public health interventions which are culturally appropriate for the population under consideration.

Hofstede's collectivism cultural dimension

Hofstede (1996) conceived culture as "the collective programming of the mind which distinguishes the members of one group or category of people from another" (Hofstede &

Hofstede, 1996). Hofstede (1996) identified five cultural dimensions, based on the value system, which include: collectivism versus individualism, femininity versus masculinity, long-term versus short-term orientation, power distance, and uncertainty avoidance (Hofstede & Hofstede, 1996).

Research has shown that individualism and collectivism (Hofstede & Hofstede, 1996) greatly influence a user's opinion regarding their ideal body image and belief about the diet–disease connection (Makino, Tsuboi, & Dennerstein, 2004). Therefore, it is possible that members of collectivist and individualist cultures will respond differently to various healthy eating determinants, persuasive strategies, and applications.

Collectivism, as a societal, not an individual characteristic, is the degree to which people in a society are integrated into groups. On the individualist side we find cultures in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side we find cultures in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts and grandparents) that continue protecting them in exchange for unquestioning loyalty and oppose other ingroups. Main characteristics of the collectivism are: "We" - consciousness, stress on belonging, harmony should always be maintained, others classified as in-group or out-group, opinions and votes predetermined by in- group, Transgression of norms leads to feelings of shame, languages in which the word "I" is avoided, the purpose of education is learning how to do, the relationship prevails over task (Hofstede, 2011). As examples of typical individualistic societies, Australia, Great Britain, Canada, and US are named. As typical collectivistic societies China, Hong Kong, India, Japan, Pakistan and Taiwan are quoted (Darwish & Huber, 2003). Individualism correlated strongly with national wealth (Gross National Product per capita) and a substantial gap exists between Eastern and less developed countries on one hand and Western and developed countries on the other. While Western Europe and North America are highly individualistic, Latin America, Africa, and Asia score very low on the individualism index with strong collectivist values (Hofstede, 2011).

In Central Europe, the positions of the Czech Republic, Hungary, Poland and Slovakia on Hofstede's dimensions of national cultures were estimated in 1998 (Kolman, Noorderhaven, Hofstede, & Dienes, 2003). Three of the four countries scored closer to the individualistic pole of the individualism-collectivism dimension (Czech Republic having the highest score), but Slovakia was markedly more collectivistic. The individualism-collectivism dimension has an important influence on the family structure. Slovakia extended families and patriarchal families prevailed while Czech families, on the contrary, were smaller, and the father's position was less strong. Poland had an intermediate position on individualism-collectivism within this group of Central European countries but is much more collectivistic than a Western country like.

Romanian cultural dimensions were assessed using the Value Survey Module developed by Geert Hofstede's Institute of Research (IRIC) in 1994 (VSM94). The study, conducted in 2005, demonstrated that Romania is similar to other Balkan countries (high power distance, low individualism, femininity, high uncertainty avoidance and short-term orientation)(Luca, 2005). Romania, with a score of 30 for individualism dimension is considered a collectivistic society. This is manifest in a close long-term commitment to the member 'group', be that a family, extended family, or extended relationships. Loyalty in a collectivist culture is paramount, and over-rides most other societal rules and regulations. The society fosters strong relationships where everyone takes responsibility for fellow members of their group (Luca, 2005).

Eating behavior identified by Health Belief Model in collectivist cultures

Collectivist cultural influence on eating behavior

Culture influences most aspects of human endeavours including why, what, how, and with whom we eat (Airhihenbuwa, 2010; Miller & Pumariaga, 2001).

Individualism and collectivism related cultural factors contributing to the overconsumption of food have been found to be a major contributory factor leading to being overweight and obese (Airhihenbuwa, 2010). Once ingrained into a culture, eating behaviours then become a way of expressing cultural identity. For instance, in many collectivist cultures, eating is an important element of social gatherings and it is considered impolite to refuse food especially when presented by a hostess. Similarly, when receiving a guest, it is considered impolite not to offer generous amounts of food (Orji & Mandryk, 2014). The cultural differences in eating attitudes and behaviours imply that an individual's cultural orientation may influence the attitudes and behaviours around healthy eating (Davis, 2009).

Recent research has shown that people are more motivated to change their unhealthy behaviour by their concern for their physical appearance (e.g., concern for weight) more than their concern for diseases (Orji, Vassileva, & Mandryk, 2012). However, this behaviour might differ depending on the cultural background of the participants, including the collectivist–individualist orientation. This claim is supported by the review which shows that the traditional Chinese, Indian, African-American and Arabic cultures prefer plumpness and therefore do not emphasize thinness as a requirement for feminine beauty (James, Pobe, Oxidine, Brown, & Joshi, 2012).

Health Belief Model and healthy eating interventions

The Health Belief Model (HBM) (Rosenstock, 1966) is a conceptual framework that identifies perceptions reflecting the extent to which people are willing to adopt health-protective behaviors. The HBM was developed to address problem behaviors that evoke health concerns. It postulates that an individual's likelihood of engaging in a health related behavior is determined by his/her perception of the following six variables: perceived susceptibility (perceived risk for contracting the health condition of concern); perceived severity (perception of the consequence of contracting the health condition of concern); perceived benefit (perception of the good things that could happen from undertaking specific behaviors); perceived barrier (perception of the difficulties and cost of performing behaviors); cue to action (exposure to factors that prompt action); and self-efficacy (confidence in one's ability to perform the new health behavior)(Orji & Mandryk, 2014).

HBM focuses mainly on health motivators; therefore, it is most suitable for guiding development of culturally appropriate weight-loss materials and intervention strategies for weight loss. The six health determinants identified by HBM provide a useful framework for designing both long and short-term behavior change interventions(Orji & Mandryk, 2014). *The perceived benefits* of losing weight included reduced risk for health problems, improved physical appearance, and living life to the fullest. *Perceived barriers* included a lack of motivation, reliable dieting information, and social support. *Motivators to lose weight* included being diagnosed with a health problem, physical appearance, and saving money on clothes. *Self-efficacy* was primarily affected by a frustrated history of dieting.

Health Belief Model in collectivist cultures

Recent studies showed significant differences between the participants from collectivistic cultures and those from individualistic cultures (Orji & Mandryk, 2014). The participants from collectivistic cultures showed lower perception of susceptibility, severity, barrier, and self efficacy. Collectivist males and females differ in their perception of severity, susceptibility, barrier, and benefit. Similarly, exploring various age groups, collectivist younger and older adults differ in their perception of severity, barrier, and self-efficacy.

These differences suggest the need to tailor various persuasive interventions based on cultural groups (collectivism and individualism).

Perceived susceptibility to obesity and obesity-related complications

The perceived susceptibility to obesity identifies beliefs related to the concepts of healthy weight, overweight, and obesity, genetics, family history, cultural view of weight, lifestyle (James et al., 2012)

In collectivist cultures, the surveys conducted in African, African-American, Indian and Arab participants reported low rating for the perceived risk of becoming obese (James et al., 2012; Orji & Mandryk, 2014; Salem & Said, 2018). The women often used sexy words to describe their bodies (James et al., 2012).

Perceived severity obesity and obesity-related complications

The perceived severity of obesity identifies the beliefs related to life threatening, restrict activities, limits wardrobe options, physical limitations, social stigma, criticism, mockery etc (James et al., 2012)

The belief that obesity leads to severe complications is especially seen in relation with extreme obesity (James et al., 2012).

Perceived benefit of losing weight

The health and social benefits of losing weight can be strong motivators to change eating habits, physical activity levels, and the response to environmental influences. Perceived benefits of being at healthy weight identifies beliefs such as looking better, feeling better, no diseases, nicer wardrobe, more energy etc (James et al., 2012).

In African-American women, obesity was viewed as a life threatening, debilitating condition: increase risk of having a heart attack, stroke or diabetes. Other health consequences mentioned were arthritis, high cholesterol, depression, and cancer (James et al., 2012). The perceived benefit is related to health reasons, high energy and increased self-esteem.

However, recent research has shown that people from collectivist communities are more motivated to change their unhealthy behaviour by their concern for their physical appearance (e.g., concern for weight) more than their concern for diseases (Orji et al., 2012). Improving personal appearance is less important than in individualistic cultures (McArthur, Riggs, Uribe, & Spaulding, 2018).

Perceived barriers to losing weight

Perceived barriers to losing weight are identified: low priority, lack self control, too busy, lack reliable information, lack support, no time to exercise etc (James et al., 2012)

Understanding the health beliefs of adolescents is particularly essential. One survey conducted in Egypt girl adolescents identified the following perceived barriers to losing weight: foods that fit into a healthier diet are not available at home, difficulty to make healthy food choices at the school canteen, lack of knowledge regarding which foods are best to reduce sugar and fat, the family habits to eat a lot of junk-food (Salem & Said, 2018). The perceived barriers influences behaviour negatively for collectivist females (Orji & Mandryk, 2014).

Cues to action

The perceived beliefs are: illness of family members, mass media weight loss programs, tight fit of clothes, joint pains, lack of energy, pre-existing health condition, physician recommendations etc (James et al., 2012)

Young people from collectivist communities (Egypt, African-American) identified as motivators for healthy eating: meaningful education about healthy foods and healthy dietary habits or knowing someone suffer from complication of obesity or malnutrition (Orji &

Mandryk, 2014; Salem & Said, 2018). The cue to action emerged as the single significant motivator of behaviour change for collectivist male (Orji & Mandryk, 2014).

Self-efficacy

Self-efficacy refers to confidence in ability to sustain a weight loss program (dieting history, need credible information, social support etc.) (James et al., 2012)

The survey conducted in collectivist communities showed that people with high levels of self-efficacy are likely to take the necessary actions to manage their weight (James et al., 2012; Salem & Said, 2018). The perceived beliefs are: the ability to lose or to gain weight if needed, the ability to stick to a healthy diet, and the ability to practice a constant physical activity (Salem & Said, 2018).

Self-efficacy has similar effects on both males and females from collectivist cultures; however, an individual's belief in their own ability is not a significant determinant of healthy eating for collectivists (both males and females) who are more group oriented (Orji & Mandryk, 2014).

The Health Belief Model offers opportunities for designing interventions for obesity prevention focusing on people beliefs. For example, lower ratings to items from the perceived susceptibility scale could be addressed by increased awareness about the risk of becoming obese and by developing healthy weight education programs. Perceived barriers to eating healthy foods and to undertaking regular physical activity also could be included in these programs by offering instruction in time management for planning physical activity into a daily schedule. Other activities could include interactive cooking demonstrations focusing on healthy food selection and preparation on a limited budget. These and other beliefs could be addressed by education on nutrition, physical activity and health consequences.

Conclusions

Hofstede's collectivism cultural dimension is important in understanding the correlation between food culture and obesity-rates. In collectivist communities, more research is needed to identify the weight-related beliefs in order to develop culturally relevant programmes for obesity prevention.

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