

Identifying Health Motivations among Emerging Adult in China through Self-Determination Theory

自我決定理論視野下中國年輕人健康動機的研究

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Abstract

Objectives: College students in China experience unhealthy behaviors such as smoking, drinking, sleep disorders, and sedentary lifestyles, which are common risk factors of chronic diseases. Lifestyle has a profound impact on one's health. The researchers tried to explore and delineate college students' motivations for a healthy lifestyle. **Methods:** 93 undergraduate students (59 males and 34 females; mean age 21.2 years) were interviewed. Verbatim transcripts were analyzed using a theory-directed approach following Self-Determination Theory (SDT). **Results:** Participants reported five types of health motivation that broadly fall under SDT: absence of motive, external, introjected, identified, and integrated. Sources for motivation identified included health literacy, the environment, and social relationships. **Conclusions:** Health practitioners in colleges in China should be sensitive to different types of motivation and factors that influence college students' goals of practicing healthy lifestyles. Effective intervention programs for improving the motivation of college students should address issues related to perceived locus of causality.

Keywords: healthy lifestyle; health motivation; emerging adulthood; college students; Self-Determination Theory

摘要

目標：中國大學生存在如吸煙，酗酒，睡眠不規律，久坐等不健康的行為方式，這些行為方式是慢性疾病的常見風險因素。生活方式對一個人的健康產生深遠的影響。在本研究中，研究者試圖探索和描述中國大學生選擇健康生活方式的動機。**方法：**共訪談了93名本科大學生（其中男性59名，女性34名，平均年齡21.2歲），並以自我決定理論為依據，對訪談記錄文本進行分析。**結果：**參與者大致報告了自我決定理論所描述的五類動機：即缺失的、外部的、攝入的、認同的和整合的等。健康動機的來源大致包括健康素養、環境因素和社會關係。**結論：**大學的健康實踐者應對影響大學生健康行為的五類不同的動機水準保持敏感，有效的以提高健康動機為目的的教育項目應著重解決因果關係感覺軌跡中的有關問題。

關鍵字：健康生活方式；健康動機；大學生；成年初顯期；自我決定理論

Introduction

Unhealthy behaviors are common risk factors of chronic diseases (WHO, 2012a). Shunning these unhealthy behaviors and stick to a healthy lifestyle plays a key role in reducing the risk of chronic diseases up to 50% (WHO, 2012b). A lifestyle, whether healthy or not, becomes relatively stable for emerging adulthood population after exploring different life experience and influences their later life (Shifren, Furnham & Bauserman, 2003).

Emerging adulthood, first described by Arnett (2000), is a crucial life span (18-25 years of age) for a lifestyle development, and college students in particular are a major group of emerging adulthood. It has been reported that college students in China experience unhealthy behaviors such as smoking, binge drinking, sleep disorder, etc., and their health status declines (Zhang & Su, 2007; Lin & Xu, 2005). Nevertheless, there have been very few studies examining health-promoting behaviors of this group of young adult (Dong, Chun-Quan, Mei-Yen & Ni, 2009).

Behavioral change is a main objective of an effective health intervention program (Jepson, Harris, Platt & Tannahill, 2010) with motivation plays a crucial role during the change process (Ryan & Deci, 2000). Health motivation, the reasons for practicing healthy behaviors, has been highlighted as a key element in the design of an effective health promotion program (Terry, 2013; Serxner, 2013).

Previous studies attempted to profile motivation more as to act healthy behaviors through different perspectives in different contexts, and focused more on physical activity type of motivations. The Health Self-Determinism Index was developed (Cox, 1985) based on the Self Determination Theory and has four sub-scales. McEwen (1993) later developed the Health Motivation Model, based on health belief models, in which health behavior mainly refers to regular exercise and balanced diet. Xu (2009) subsequently proposed a four-stages model to apprehend health motivation, considered as the reasons for health related behaviors, by dividing it into two types: motives for exercises and motives for eating behaviors. In addition to exercise and nutrition behaviors, there are four other types of health behaviors, namely, life appreciation, stress management, health responsibility and social support (Chen Wang, Yang, & Liou, 2003). As health is a multi-dimensional and integrated concept that embraces physical,

mental and social wellbeing (WHO, 2013), it is perhaps fair to conclude that previous research has casted more attentions on physical health, although mental health is widely believed as equally important.

Motivation is believed to be a major driving force for people who wish to have a healthy lifestyle (O'Donnel, 2012). Identification and implementation of health motivations for healthy behaviors during emerging adulthood can have a profound and prolonged impact on health. We therefore initiated the present study to examine health motivation among college students in China.

Methods

Participants

Posters and e-mail advertisements were circulated at two universities, one in the South and one in the middle part of China. Those expressing an interest in participating in the study were asked to leave their email address. Then, they were sent a short open-ended questionnaire asking their healthy lifestyles. During the initial screening process, students aged 19-24 who responded by saying that they are practicing healthy lifestyles and stated clearly what kinds of healthy lifestyles they are practicing were included. Within the initially selected people, only those who claimed that they have set personal health goals and possess a variety of reasons for practicing a healthy lifestyle, which can range from external motivation to integrated motivation, were kept in the recruitment list. Then, 100 students were randomly selected from the list. In addition, 30 students were selected from those who responded that they did not have any health motivations but were still practicing healthy lifestyles. Eventually, 93 undergraduate students (mean age=21.2, SD=1.4 years) came to the focus-group discussions described below. The mean age of the participants was 21.2 years; with 59 males and 34 females; 63 from the countryside and 30 from cities; 48 were qualitatively identified as having non-autonomous health motivations, 29 were identified as having autonomous health motivations, while 16 students reported that they did not have any health motivations. Ethics approval was obtained from the Hong Kong Institute of Education. Written informed consents were obtained from the participants before the interview.

Procedures

The 130 originally selected students were divided into 13 groups, with 10 in each group. Eventually 93 students attended the focus-group discussion; the final group size ranged from 6 to 9. Each group session was scheduled for one hour. Although over-time was allowed, participants were strongly encouraged not to repeat what other students had already said in order that the session would not be too lengthy. The pool of discussion questions was generated with reference to previous research (Ryan & Connell, 1989; Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992; Moilanen, 2007; Kim, Deci & Zuckerman, 2002; Wentzel, Looney & Filisetti, 2007; Okada, 2005). Each interview started with questions about interviewee's health behaviors, e.g. "Tell me your specific health behaviors that have already been set up in your mind, at least for the coming semester but could be for a longer period". Then, participants were asked questions related to their understanding of healthy lifestyles as well as the reasons and goal if any, for practicing healthy lifestyles. Prompts were provided in order to encourage participants to talk freely and spontaneously. The interviews were recorded and transcribed; and transcriptions were shown to the interviewees for confirmation purpose.

Data Analysis

The current study adopted the directed approach (Hsieh & Shannon, 2005) to content analysis. Two research assistants (RAs) were hired and trained with operational definitions of motivational levels. In the first coding stage, the two RAs independently coded and identified raw data themes (or items) line-by-line, and assigned conceptual labels to each line. An inductive analysis was then undertaken to identify more general themes (dimensions or categories) during the second coding phase. Each of these themes (regardless of whether themes were raw data or more general) was considered to be distinct. Consensus was reached and disagreements were resolved through further discussions with the first author.

Results

Types of Motivations

Absence of Health Motivation

In the present study, 16 participants refused to believe healthy behaviors could improve their health status; they did not have a feeling of competence when they practice health-related behaviors, and they could not

perceive the connections between their health practice and any health outcomes. For instance,

- "I think it's unnecessary to live a very long time. To me, for example, sometimes I play basketball; but frankly speaking, I don't do this for health reasons."
- Some students do not think about it in daily life unless they face health problems:
- "I will think of it (healthy lifestyle) only when I have health problems; I never consider doing it in my daily life. I just want to make a plan for my health only after, for example, I get a stomachache or headache."
- "I do not have any particular plan related to health. Because I am a university student, my self-control ability is not strong enough. I realize it the importance of health only when I have health problems, but usually I do not have any intention to take actions."

Some said they understand the importance of healthy lifestyle, but there are other more important goals in their lives.

- "I believe young people generally do not have much health motivations. Young people sacrifice health to make money; old people spend their money to have health."
- "Of course it is good to have a healthy lifestyle, but young persons have to face many challenges and pressure from school and the society. So I think it is really hard to have the luxurious to think about healthy lifestyle.
A healthy lifestyle was also perceived as a burden.
- "I do not like following the same procedures every day; I am not a rigid and disciplined person, I do not like an inflexible life."

External Health Motivation

Assignments, performance in examinations have been reported by many students as important external reasons for participants to stay healthy. Typical comments were:

- "I got a lot of pressure from my study and assignments, so I must have good health to cope with the pressure."

- "Healthy lifestyle could bring good changes to your body so that learning may be more efficient and you will not get tired easily. I often fall asleep in class, so living in a healthy way could be helpful for my learning."

Parents, teachers and close friends have been reported as strong external "forces" for college students to practice healthy lifestyle.

- "My parents constantly remind me to eat well, to exercise, and not to sleep too late. Their words make me realize that I should do what they say, although it is hard to persist."
- "If my parents do not keep on reminding me, then I think it will be hard for me even to think about a healthy lifestyle."
- "I practice healthy lifestyle, but unconsciously. My teacher said I should do it; I therefore just follow his instructions."
- "My health motivation comes from friends, classmates, and roommates. Many students do not want to exercise unless they can find someone to accompany them. I think companion is a good source of motivation."

Some students were conscious about their personal image and believed keeping healthy will give other people a positive impression.

- "I adopt a healthy lifestyle because I want to create a good physical impression."
- "I will not be confident to communicate with others unless I have a good body shape."

Participants also explained that they practiced a healthy lifestyle in order to have good health and avoid expensive treatment expenses. Typical arguments put forward were:

- "The reason I do it is because I was severely ill; I suffered a lot from that and I simply cannot get sick again!"
- "I am from a poor town. I have seen many cases that when a person gets severe illness, the family has to spend all the savings for expensive treatments, which subsequently affects their daily life. That is bad; I cannot afford a severe illness, I have to stay healthy."

- "I have a good friend who is at final stages of cancer. His illness has a profound impact on us. Before that (her friend got cancer), I did not care too much about my health but I am now scared that the same will happen to me (if I do not have a healthy lifestyle)."

Introjected Health Motivation

Several college students expressed that they had a feeling of guilt when they failed to adopt healthy lifestyle; some of them even said that they could have a negative sense of ego.

- "Sometimes I sleep very late, which I know is terrible unhealthy. In the next few days, I will make every effort to sleep regularly because I feel very bad if I do not do that."
- "I just feel guilty if I have unhealthy behaviors."
- "When I started college, I made up my mind to live a healthy life. When I failed to exercise, for example during rainy days, I really despised myself."
- "I regret that I perform unhealthy behaviors from time to time; it truly is a failure of self-control. But I will forget soon because I have many other things to take care of."

Specific Health Motivation

Many participants believed that there is a positive relationship between healthy lifestyle and individual health.

- "I think there is a strong association between healthy lifestyle and individual's health."
- "Health and healthy lifestyles cannot be separated."
- "I practice health-related behaviors for simple reasons: I do not want to be sick and wish to live longer."
- "A healthy lifestyle will give me good health; then I can enjoy my life more."

For these students, health is fundamental and an important asset in their lives; health could lead to improved quality of life and enable them to achieve their goals and enjoy life more.

- “Health is one of the biggest assets in my life. I will not be able to do many things that I want or need to do if I am not in good health.”
- “I want to maintain good physical condition and I must also be mentally fit, so that I could have excellent life quality and enjoy life.”
- “I have personal goals in my life ahead to achieve, and being healthy is the basis of all.”
- “Health is crucial, without which we can do nothing. I will be a doctor and be responsible for other people's health. I cannot afford not to have good health myself.”
- “I did not understand why my parents complained about my lifestyle regularly; I considered that as interfering with my life. Now I realize they have huge expectations on me. It was not easy for them to raise me; so to have (a healthy lifestyle in order to have) significant achievement is my responsibility to them.”

Integrated Health Motivation

Some participants practiced a healthy lifestyle because it was fun; they enjoyed the process of practicing health related behaviors; it was also their personal interest.

- “I have a healthy lifestyle, I really enjoy the process of it; it is fun and full of pleasure.”
- “I keep a healthy lifestyle because I want to be happy and satisfied; and I do have such a feeling.”
- “Having a healthy lifestyle is one of my habits”.
- “Living a healthy lifestyle makes me happy because it is what I really want to do. If there is inconsistency between what I do and what I want to do, I will not be happy.”
- “I want to be sunny and bright; I could have health inside if I am healthy outside.”

Sources and Resources

Health Literacy

Participants repeatedly indicated that their health motivation originated from health literacy. Therefore, health

literacy can be considered a major factor motivating healthy behavior.

- “In modern society, chronic diseases are common. I saw many reports on, for example, the prevalence of high blood pressure and diabetes in our society; so I know I need to take actions before it gets too late.”
- “I am a medical student. I learned a lot about health in classes; and from that I know I better have a healthy lifestyle. I also noticed my knowledge in health was very limited before I attended medical classes.”

The Environment

Media coverage plays an important role in the process of motivating college students to live a healthier lifestyle as college students acquired health information and knowledge from various sources, especially the Internet. Whether there are supportive physical environments has also been mentioned as an incentive.

- “You know this (unhealthy lifestyles could lead to chronic diseases) if you switch on the television or surf the web; knowing these has affected my behaviors.”
- “We can find a lot of (health) information on the blogs and different websites; I learn, for example, how to release pressure and build up confidence; I find them very useful.”
- “Through media reports, I heard that some people suddenly die because of excessive work or live in an unhealthy way. I alert myself and try to avoid doing these”
- “I exercise more regularly because the university has excellent facilities. In turn I find myself enjoying a healthy lifestyle.”

Social relationship

It was clear that students' health motivation is strongly influenced by others who have a close relationship with them.

- “It's been a long time since last time I went home. I was shocked when I heard that one of my relatives had passed away because of cancer. I was scared and had a feeling that death was not far away from me as the person was a very close relative.”

- "No doubt friendship plays a key role; for example, if I go exercise after class, I probably will be having dinner alone (because others have already finished eating); I will find myself in limbo."

Discussion

Self-Determination Theory not only considers goal fulfillment, but also focuses on autonomous motivated behaviors (Deci & Ryan, 2012). It pays close attention on need satisfaction and psychological wellbeing. The key elements of health concept and the basic principle of Self-Determination Theory are congruent and fit well.

College students are the main part of the emerging adulthood population who experience a crucial transitional period from adolescence to adult. It is important to help them establish a healthy lifestyle; more importantly to arouse their motivation to live in a healthy way, and persist for the rest of their lives (O'Donnel, 2012). A healthy lifestyle covers a variety of behaviors (Dong, Chun-Quan, Mei-Yen & Ni, 2009), and although there are a number of studies (Markland & Tobin, 2004; Okada, 2005; Verstuyf, Patrick, Vansteenkiste & Teixeira, 2012) on motivations for certain kinds of health behaviors, there has been limited research on healthy lifestyle motivations for this particular population. It is worthy to explore why some college students are motivated to undertake a healthy lifestyle whereas some others are not.

In developing an inventory to measure health motivations of college students and to identify potential interventions to improve their motivation level, it is important to collect the perceptions of college students on healthy lifestyle, difficulties they encounter and suggestions for prompting them to wish to have healthier behaviors.

The findings from the present research appear to support a number of major principles in Self-Determination Theory. People who practice healthy lifestyles do so at a variety of different motivation levels. However, implications about these different motivation types from the present study need to be clarified in the health practice context

Absence of health motive refers to college students who lack any motives to practice healthy lifestyles. Although a negative relationship had been observed between motivations and outcomes (Standage, Duda & Ntoumanis, 2003; Pelletier, Fortier, Vallerand & Brière, 2001), some participants claimed that they were practicing some forms of healthy lifestyle (e.g., playing sports) even

though they did not think there need to be any reasons. For some students, lack of health motivation does not necessarily mean absence of health-related behavior.

If the reasons for practicing healthy lifestyles are from social pressure, external reward or punishment, or outside influence, that is external health motive; the sense of "others" can be expressed through the description when students explain their reasons for doing healthy behaviors (Ryan & Deci, 2004). External reward or punishment (Kowal & Fortier, 1999) does not seem to affect health related behaviors among college students, as no participant reported these sorts of reasons. Because there is no external reward or punishment, and no immediate negative consequences of being inactive, we can infer that students with this level of health motivation are more unlikely to participate in health-related behaviors. Evidence from the study indicated that health motivation of college students was pressed or influenced by significant others, such as families, teachers, friends and peers. If the pressure from others is removed, it is not sure whether students with external health motivations will persist in their health related behaviors.

Introjected health motive results from internal pressure, such as experiencing feelings of guilt or anxiety if students failed to perform a healthy lifestyle. Introjected motivation is generally accompanied by tension or psychological struggle between "have" and "identified" to do it, as well as their interaction (Ryan & Deci, 2004). Individuals who possess identified health motive experience a sense of value when they perform healthy behaviors in order to maintain their health, and a sense of "I" can be expressed (Vallerand, 2001) when college students describe their reasons for pursuing their health goals. Integrated health motive refers to reasons such as personal interest, hobbies, curiosity, and the spirit of exploration that can keep college students practicing a healthy lifestyle. In the present study, identified and integrated health motives are well exhibited in line with Self-Determination Theory.

Although both autonomous and controlled health motives were identified, a number of participants did not report any health motives. Some of them even consider healthy lifestyle as a burden, and are seemingly unaware of the consequences an unhealthy lifestyle might bring. A number of robust evidence has been found that the level health literacy is not only a key factor that may influence healthy lifestyle decision and motivation, but also

an important determinant to health (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011). It is perhaps useful to remind practitioners to first evoke college students and enhance their autonomous health motives. It is equally important to provide students with information on how to live a healthy lifestyle while students are responsible for the choices they make.

Autonomous motivations interact with past behaviors, they together predict strength of habit, and autonomous motivations have an independent direct impact on strength of habit (Gardner & Lally, 2013), and based on that we consider this as a very important symbol of the sense of "self". A number of studies repeatedly demonstrated autonomous motivation could positively predict outcomes. However, controversy can be found about the relationship between controlled motivation and expected outcomes. Controlled motivation is believed to be negatively related with outcomes (Deci & Ryan, 2002; Koestner, Otis, Powers, Pelletier & Gagnon, 2008), whereas other research (Judge, Bono, Erez & Locke, 2005) claimed that controlled motivation is not associated with outcomes, based on three mini-studies and results of a meta-analysis. Koestner et al. (2008) further suggest more attention should be paid on enhancing autonomous motivation, rather than repressing controlled motivation. Based on previous studies and results from this study, we postulate that controlled motivation will have a positive association with behavioral outcomes if we provide enough and prompt reminders, feedback, cues, or other forms of stimuli.

The present study has several implications. First, health practitioners in college are advised to be sensitive to different types of motivation and a variety of factors that may activate and influence the setting of healthy lifestyle goals. Second, an effective intervention program for the improvement of health motivation among college students should address a number of issues related to, in essence, perceived locus of causality from external to internal. In particular, practitioners are recommended to facilitate perceptions of competence through goal achievement. Based on findings from the current study, we plan to develop a measurement scale useful for identifying the health motivation level of college students.

Limitations of the present study need to be acknowledged. China is a very large country; students included in this sample may not be representative of the entire population of college students in China. Students

from Hong Kong, Macao and other areas in the greater China region have not been included either; some important regional health motivational aspects of Chinese college students therefore may be missing. On the other hand, we have tried to conquer the challenges when conducting focus groups as discussed by Daley (2013). For example, we tried to balance demographic status by recruiting participants at different health motivation levels using a pre-mini test; but the potential influences by peers and moderator (Daley, 2013) still cannot be eliminated completely. Moreover, longitudinal studies examining the relationship between religious belief and health status (George, Ellison & Larson, 2002; Gillum, King, Obisesan & Koenig, 2008) found a link between intrinsic and pro-religious motivation and health related behaviors (Masters & Knestel, 2011). However, in this study, only one participant acknowledged that religious beliefs influenced his choice of a healthy lifestyle. Only 2.1% of Chinese college students hold strong religious beliefs and actively participate in religious activities (Liu, Hou & Li, 2013). Based on this, we decided to exclude religious factors from the present health motivation study. Further study on the influence of religious beliefs may need to be conducted with participants selected religious minority regions such as Tibet and Xinjiang.

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