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Original Article

Illness perception and cardiovascular health behaviour among persons with ischemic heart disease in Indonesia

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ABSTRACT

Objective: A study was conducted to explore the level of illness perception, the level of cardiovascular health behaviour and the relationship between illness perception and cardiovascular health behaviour among persons with ischemic heart disease (IHD) in a community setting.

Method: The participants comprised 235 persons with IHD. The instruments used were as follows: 1) Demographic Data and Health Information, 2) The Brief Illness Perception Questionnaire (Brief IPQ), 3) The Open-ended Questionnaire (OEQ), and 4) The Modified Cardiac Health Behaviour Scale (MCHBS). Findings from the OEQ are used to assess in-depth illness perception and to extend the information obtained from the Brief IPQ. The design of the study was descriptive correlational. The data were analysed using descriptive statistics to present the demographic data and health information. Inferential statistics was used to resolve the relationship between illness perception and cardiovascular health behaviour by using Pearson's Product Moment Correlation.

Result: The mean score of illness perception was at a moderate level ($M = 43.65$, $SD = 3.93$), whereas the mean score of cardiovascular health behaviour was at a high level ($M = 80.29$, $SD = 5.42$). A significant positive relationship existed between illness perception and cardiovascular health behaviour among persons with IHD ($r = 0.38$, $P < 0.01$).

Conclusion: Persons with higher illness perception showed a positive correlation with higher cardiovascular health behaviour at a significant level of 0.01. Results provided important information for nurses to develop an intervention program to promoting appropriate illness perception and cardiovascular health behaviour among persons with IHD.

1. Introduction

Ischemic heart disease (IHD) is the leading cause of death. IHD is a heart problem caused by reduced blood supply to the heart, and thus less oxygen reaches the heart muscle. The World Health Organization (WHO) reported that 17.5 million people died from cardiovascular disease in 2012 worldwide and, 7.4 million of these deaths are due to IHD [1]. The prevalence of IHD has increased each year. According to Riskesdas [2], the prevalence of IHD in Indonesia was increased from 0.5% (in 2007) to1.5% (in 2013). In Bondowoso, a city in East Java Province, Indonesia, the prevalence of IHD was 235 people in 2012; this number increased to 558 people in 2013, the highest in Indonesia [3].

People with IHD still behave in the manner they did before their diagnosis. A diagnosis of IHD has a great impact on the health of a person such as the productivity of one's life, as well as on families, and societies [4] but they did not care about that and still continue smoking, uncontrolled blood pressure, unhealthy diet and physical inactivity. Persons need to respond effectively to a diagnosis of IHD and employ both cognitive and behavioural strategies [4]. Schroeder [5] stated that more than 60% of IHD risk factors are preventable and modifiable by performing healthy behaviuor.

Changing a person's behaviuor is important to reduce IHD risk factors and improve the cardiovascular health of a person. Studies about cardiovascular health behaviour to reduce the impact of cardiovascular disease have been conducted in Western countries [8] and Asian countries [9]. Modifiable risk factors particularly smoking cessation, checking blood pressure levels, diet management, physical activity, and stress management [7] could control the risk of IHD [6].

Earlier studies on the factors related to cardiovascular health behaviour have also been conducted in Nepal [10] and America [11].

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Behaviour is associated with illness perception. Illness perception emerges as a result of our beliefs about illness and what illness means in the context of our lives. A person might have her/his own thoughts about how an illness is caused, how long it will last, how it will affect her/his life, and how it can be controlled or cured [12]. Thus, illness perception promoting-program significantly improved behaviour in patients with end-stage renal disease who were received hemodialysis [13] and had significant relationship with healthy behaviour in patients with CHD [15]. Previous studies had attempted to explore the relationship between illness perception and behaviour. The perception or the formation of a perception results from information inherent in a culture [14]. However in Indonesia, no study has been conducted on this topic. A different culture might present a different perception of illness which may be the case in Indonesia due to lack of the state of knowledge. Furthermore, previous studies had revealed that patients' illness perceptions influence their thoughts and health behaviour [16].

Previous studies have explored illness perception. However, all of these studies did not specifically focus on the relationship between illness perception and cardiovascular health behaviour. Furthermore, these studies are conducted in a clinical setting, whereas there are many more persons with IHD in the community [17] and there is a need to assess these persons illness perception. Broadbent [16] explained that illness perception could be linked to behaviour, specifically cardiovascular health behaviour. Illness perception among persons with IHD is influenced by various factors, including race, faith, and preclinical illness quality of life, rather than clinical measures [18]. The findings of these previous studies might not be applicable to persons with different cultural backgrounds, especially in the Muslim context.

The Western and the Eastern health cultures are the two kinds of general cultural backgrounds in the world [19]. Western culture has high technology and a high level of awareness of health, while the Eastern culture has traditional Asian health treatments and healing practices [20]. Indonesia is one of the Asian countries with a unique culture in terms of health behaviour because of differences geographical and cultural aspects. For example, the people in Central Java consume more salty and fatty foods. Whereas those in West Java, eat more vegetables [21]. Furthermore, in the mountainous areas, 80% of people tend to smoke, and in the coastal areas people often drink alcohol and have low levels of physical activity [2]. Thus, different backgrounds can influence a person's illness perception [22], which leads to future health behaviour [23].

Therefore, in this study the researcher explored the relationship between illness perception and cardiovascular health behaviour among persons with IHD. The result of this study could be used to promote secondary prevention for IHD and baseline knowledge for health care provider to increase person's awareness of performing daily cardiovascular health behaviour, such as smoking cessation, controlling blood pressure, diet management, stress management, and taking medications to control the risk of IHD.

2. Objectives of the study

The following are the objectives of this study:

2.1 To examine the level of illness perception among persons with IHD
2.2 To examine the level of cardiovascular health behaviour among persons with IHD
2.3 To explore the relationship between illness perception and cardiovascular health behaviour among persons with IHD

3. Methods

3.1. Design

This descriptive correlational study is conducted to explore the relationship between illness perception and cardiovascular health behaviour among persons with IHD.

The Common Sense Model (CSM) of illness perception proposed by Leventhal, Nerenz and Steele [24] was used as a conceptual framework for this study. The CSM explains the way a person makes sense of her/his illness which influences her/his behaviour. This model is used to explain the link between illness perception by forming a cognitive representation of the threat and cardiovascular health behaviour, which guides the coping strategy. This study focused on both cognitive representation and emotional representation, which lead to coping and the modification of modifiable risk factors of persons with IHD in relation to cardiovascular health behaviour so that the disease can be controlled.

3.2. Instrumentation

The instrumentation is composed of four parts. They are as follows:

3.2.1. Demographic data and health information

The demographic data and health information were used to assess age, gender, religion, marital status, education status, smoking, weight, physical activity, cholesterol levels and blood pressure levels obtained by asking questions. Health information was obtained from records from the public health centre. Demographic data and health information for all questions consisted of 10 items, 4 items for demographic data and 6 for health information.

3.2.2. The Brief Illness Perception Questionnaire (brief IPQ)

The Brief Illness Perception Questionnaire (Brief IPQ) was developed by Broadbent et al., in 2006. The Brief IPQ consisted of 9 items. Each item of the Brief IPQ assesses one dimension of illness perception, namely consequences, timeline, personal control, treatment control, identity, coherence, emotional representation, concern, and causes.

Items 1 to 8 were measured in a continuous scale ranging from 0 (less threatening view of the illness) to 10 (high threatening view of the illness). The details of each item were as follows: Item 1 measured the Consequences (no effect at all to severely affect a person's life). Item 2 measured timeline (a very short time to forever). Item 3 measured Personal Control (absolutely no control to extreme amount of control). Item 4 measured Treatment control (not at all to extremely helpful). Item 5 measured Identity (no symptom at all to many severe symptoms). Item 6 measured Concern (not at all concerned to extremely concerned). Item 7 measured Coherence (do not understand at all to understand very clearly). Item 8 measured Emotion (not at all affected emotionally to extremely affect emotionally). Item 9 was an open-ended response item to capture causes, by asking the participants to list three most important causes of their illness.

The scores from items 1 to 8 were analysed and interpreted as mentioned above, in order to understand the dimensions of illness perception as described originally. The total illness perception scores were computed by summing up the scores from items 1 to 8, with reverse scores of the items 3, 4, and 7. The possible scores ranged from 0 to 80, with higher scores indicating more threatening perception of the illness. For further interpretation of the Brief IPQ, the scores were divided into three groups: scores 0–27 indicated low level of threatening illness perception, scores 28–55

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