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HOW METABOLIC SYNDROME PATIENTS COPE WITH STRESS: A QUALITATIVE STUDY

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ABSTRACT

***Background*:** Having multiple kinds of health problems among metabolic syndrome patients may cause them stress. Life events also may worsen their stress. Negative stress affects not only their physical but also emotional health. Various coping styles are used in order to deal with their stress. However, not all coping styles can overcome their stress.
Objectives: This study aims to explore the coping styles that have been employed by the stressed metabolic syndrome patients in Hospital Universiti Sains Malaysia, Malaysia.
Method: Semi-structured interviews were conducted with the stressed metabolic syndrome patients in Hospital Universiti Sains Malaysia. A purposive sampling was selected among stressed respondents, as fifteen of them participated in this study after saturation data was reached. The qualitative data was analysed using content analysis and was categorized into dysfunctional, problem-focused and emotion-focused coping.
***Results*:** The themes that emerged were; self-distraction, venting, behavioural disengagement, denial and self-blame. These were categorized as dysfunctional coping; acceptance, religion and emotional support as emotion-focused coping and active coping and instrumental support which were categorized as problem-focused coping. Other new coping styles identified were physical intervention, avoidance and emotion suppression.
Conclusion: Coping styles has direct influence on the feeling of stress. Stressed patients used many dysfunctional coping styles rather than other categories of coping which lead them to remain in stress. These data highlighted the need to educate patients about good coping styles to give them additional skills in managing their stress thus improving their health.

Keywords: Coping Styles, Metabolic Syndrome, Patients, Stress, Qualitative Study

INTRODUCTION

Metabolic Syndrome (MetS) is considered as one of the most severe health problems in the world. Occurrence of Metabolic syndrome (MetS) has increased worldwide due to the increase in obesity and diabetes mellitus (Zimmet *et al*., 2001) along with the elevated risk of cardiovascular diseases (Grundy *et al*., 2005). In Asia, the incidence of MetS is increasing as a result of rapid socioeconomic development (Nestel *et al*., 2007). The overall prevalence of MetS in Malaysia according to association of the International Diabetes Federation (IDF), National Cholesterol Education Program (NCEP ATP III) and World Health Organization (WHO) definitions were 22.9%, 16.5% and 6.4% respectively (Tan *et al*., 2008). The differences in the prevalence of MetS were due to the varied definitions given by the associations.

MetS cause negative stress because of the physical limitation and changes in the patients' daily routine. The negative stress derived from MetS combined with other stressful life events such as finance- and work-related problems can worsen the condition; physically and mentally. Coping strategies play a major role in physical, psychological and social well-being of an

individual (Taylor and Stanton, 2007). The success of managing the negative stress depends on the chosen coping strategies. Good coping strategies can reduce their stress level and improve their physical health by maintaining good blood glucose level in diabetes patients.

Many studies conducted in Malaysia focused on the prevalence of MetS based on several definitions presented by IDF, NCEP ATP III and WHO (Mohamud *et al*., 2012). Furthermore, studies on MetS in Malaysia appeared to focus only on sources of negative stress with the criteria of MetS like diabete (Salmiah, 2009; Kaur *et al*., 2013). To date, there are still minimal data on psychological coping strategies among MetS patients in Malaysia.

Hence, this study aims to explore the coping strategies that have been employed by stressed Mets patients in Hospital Universiti Sains Malaysia.

METHODOLOGY

Ethical approval

Official ethical approval was obtained from the Ethics Committee of Universiti Sains Malaysia with the reference number, USMKK/PPP/JePeM [251.4(1.6)]). A formal permission to conduct the study in the selected area was also obtained from the Director of the hospital. Subsequently, contacts were established with the respondents to discuss the meeting date, time and location for data collection.

Study site

Data collection was conducted among stress metabolic syndrome patients in two outpatient clinics at Hospital Universiti Sains Malaysia.

Data collection technique

A qualitative study design was used with content analysis to gather the information desirable as this was the most applicable method to produce in-depth knowledge about patients' experiences. Guiding semi-structured questions were developed by the researchers after consulting experts in order to ensure that the needed data and objectives were achieved. The questions were amended after two pilot interviews were conducted. The topic discussed was based on the brief COPE coping strategies domains. Other additional relevant domains of coping strategies created were not in the brief COPE, that the researchers and the experts thought that they would be relevant as questions (Carver, 1997).

Each interview lasted approximately 45 minutes to an hour, giving participants sufficient time to expand their answers. The interviews were recorded and then were transcribed verbatim by the interviewers. The transcripts were then imported into N-Vivo software version 10 for data organization. The initial coding scheme was built by assigning codes for the collections of text units that showed the same concept. Comparison of the codes was made and related codes were then sorted into three groups of problem-focused, emotion-focused and dysfunctional coping according to the brief COPE. Translation of quotations from Malay to English was made at the end of the procedures for the result presentation. The translation was reviewed by the experts to preserve the original meaning of the conversation.

Participants

Fifteen respondents were recruited in this study. The participants were selected based on inclusion criteria as follows: 1) male and female 2) 18 years and above 3) can read, and communicate in Bahasa Melayu or English 4) stress metabolic syndrome patients by using ATP III definition and 5) having no mental retardation.

Study Procedure

Data collection was carried out from December 2012 to June 2013. The respondents were given a thorough explanation on the study purposes. Written consent form was signed upon participants' agreement. Semi-structured interviews were conducted to deliver the intended questions and pose additional probes to encourage the conversation. The interview questions were open-ended and focused on patients coping strategies used.

RESULTS

The themes identified were as followed:

Categories	Domains
Dysfunctional coping	Self-distraction, self-blame, denial, behavioural disengagement and venting.
Emotion -focused coping	Acceptance, religion and emotional support.
Problem -focused coping	Active coping and instrumental support.
Additional themes	Distancing, emotion suppression and physical intervention.

3.1 Dysfunctional Coping

Theme 1: Self-distraction

93.3% of the respondents avoided facing the problem directly, by doing something different that was not related to the problem they faced.

Like going to the beach, tidying up the house or do something that can make me forget that thing such as reading novel and listening to loud songs.

A young respondent however, preferred to use technology by surfing the internet when facing stress.

When I am stressed, I like to access the internet.

Theme 2: Venting

Some of the respondents (66.7%) used venting coping strategies to release their stress. They tended to use crying as a coping strategy when they were in stressed.

During stressful time, crying then felt released.

Some of them (40%) cope with the stress by releasing their anger to others. When asked about the person whom they released their anger to, they said the close one such as their children and husband.

Not only one, but all will be scolded. If one of them makes me angry, all of them are scolded by me, all of them. Anyone, who is there at that time.

A young respondent, however, had her own way in venting her problem. She preferred to scream out loud to release the unhappiness and isolated herself from others.

I scream alone, isolate myself in my room for a while.

Theme 3: Behavioural Disengagement

A few of the respondents tended to give up when they cannot solve the problem or when they felt that their efforts are useless.

Yes, when everything was done but the result was still the same…feeling empty.

Theme 4: Denial

One of the respondents used denial as coping strategies. She denied that she had problem. However, throughout the interview session, the researchers realized that she had but she was in a denial state.

I don't have a problem, never think about the problem.

Theme 5: Self-blame

One of the respondents kept blaming herself and regretted her failure for not being a good wife for her late husband and her children. She kept thinking about what the sins she had committed to her late husband even though she was going out for working to support their life.

When he was sick, I left for work. So I don't have time with him, stay with the children. We come back in the evening, we are tired…..So, I thought of many sins. I don't know what to do. There are people asking me to repent to God.

3.2 Emotion-focused problem

Theme 6: Religion

The respondents do not only use dysfunctional type of coping, but also use emotional coping strategies when dealing with stress. One of the emotional coping strategies they used was religion. Almost all of the respondents preferred to cope by using religion. With that, they felt released.

Problem, if so, I pray, yes, I do pray.

Besides, they also did another religious activity like reciting *dzikir* and Quran.

Yes, it depends on what we want to read, to clear the mind so that we forgot the problem, we recite quran many times. So, yes, we will forget the problem.

A few of the older respondents preferred to attend the religious classes or listen to the religious talks at the mosque nearby their houses.

Attend the religion classes every Tuesday and Wednesday.

Theme 7: Acceptance

They accepted the problem as a test from the God to His creation. They accepted what God have granted to them whether it was what they want or otherwise. According to the respondents, they tended to be patient as they believed the reward for being patient when facing the test from the God was something better.

Yes, because of God's gift, we accept it.

Theme 8: Emotional Support

About all of the respondents used emotional support when dealing with stressful events. They tended to get emotional support from their closed family members like husband and children in order to release the feeling of apprehension.

After that, if I really worry, I talk with children. It's like expressing the feeling to them. If anything

happened, the children will talk like this and like this. So, we feel relieved and we forget about that stress.

Problem-focused

Theme 9: Some of the respondents were using active coping styles when dealing with their stress. Three sub themes were identified and they were:-

I) Compliance to treatment

Many respondents used active coping especially when dealing with stress regarding poor health status. Most of the respondents had undergone treatment, complied with the doctor's appointment and medication prescribed.

I always attend the appointment. I attended every appointment. If I cannot attend the appointment or I need to go somewhere, then I make another appointment. That thing, I never missed.

II) Compliance to dietary service

Many respondents practiced active coping of their diet management. They follow the physician's advice in managing the diet intake.

I am aware to take any food. Beware to take rambutans, because a dietitian had advised me about that.

Other respondents controlled their diet by not consuming sweet food.

I don't take other food such as bicarbonate drinks. I didn't take it for years. Same goes to chocolate. If I really crave for it then I will eat only a little. Even durian, whenever I crave for it, I will take it but only one.

III) Seeking for the traditional treatment

There were some respondents who tried to find other alternative treatments, for example, seeking the help of traditional healers in order to release their burden of health.

I meet traditional healer. When people told me about the effectiveness of traditional healer in treating the disease, I will go. Not to say that traditional healer has the power to cure the disease. God asks us to try, and meeting a traditional healer is one way to heal my disease.

Theme 10: Instrumental support

Several respondents reviewed instrumental support as their coping styles. Two of them received financial support which was also known as a tangible support from the welfare department.

From the welfare…..... It was because I asked a doctor here; I told him that I did not want to come to see the doctor as I didn't have money. To get treatment, I need to pay for the specialist, right? Then, I asked for a doctor's referral letter to send to the welfare department. "Can", he said. So, he made a letter, I brought it to the welfare, after two months, it was approved.

Theme 11:Avoidance

Some of the respondents (13.3%) used distancing as their coping strategy especially when the problem was related to relationships between humans. They tended to avoid things that can make them feel tense.

I try to avoid from going to neighbours' house if there is nothing important like neighbour's ill. I didn't go for only chit chat and backbiting.

Theme 12: Physical intervention

Several of the respondents (40%) used physical interventions in their daily life. Physical interventions were activities such as gardening or playing with grandchildren.

Even, just recently I have baby sat, before this I did not babysit. I do gardening at the back of my house, hoeing and planting. However now, because the child stays at Pasir Pekan, when she is not here, I sweep the ground; also go to the orchard, plant banana trees, plant rubber trees.

Younger respondents however, used other approaches to fill their time by doing exercise.

Sometimes, I play something sweaty like badminton to produce sweat.

DISCUSSION

This study explored the coping strategies that have been used by stressed MetS patients. The study addressed an important matter in health care particularly as a preventative measure, as stress could affect the patients' well-being, physically and mentally. It is generally accepted that coping influence the stress experience. The MetS' complication can cause stress thus increases the incidences of mental illnesses like anxiety and depression. The stress also worsens the health condition of MetS patients by altering the normal body physiology as well as interrupting their glucose and metabolic function.

By exploring how youth with MetS cope with stress, it is possible to identify the best way to teach them good coping strategies, and how to help them reflect on their use of particular dysfunctional strategies in order to reduce their reliance on those styles. Various manners of coping have been practiced by Mets patients in this study. The analysis resulted in themes that were divided into three group coping categories (Carver, 1997). The themes that fall under problem-focused coping were active coping with three subthemes of compliance to treatment, compliance to dietary intake and seeking for the traditional treatment; and instrumental support. Themes that were considered as emotional focused on acceptance, religion and emotional support. Other themes of self-distraction, self-blame, denial, behavioural disengagement and venting were categorized as the dysfunctional coping styles. Other than that, the themes that were not included in the brief COPE were distancing, emotion suppression and physical intervention.

Dysfunctional coping styles

Findings of the study revealed that stressed patients were using various coping styles from each category. However, they prefer and frequently used dysfunctional coping. Yet, distressing or disabling chronic medical illness challenges effective coping (Downing *et al*., 2012). Usages of dysfunctional coping were considered as factors that caused them to remain in stress. Self-distraction was considered as a dysfunctional coping or avoidance coping as the investigators concluded that distress was consistently related to it (Mukwato *et al*., 2010). The patients prefer to use distractions rather than thinking about their diseases and thus ignoring their self-care. This leads to distress after they realized that their diseases worsen. Respondents in this current study used self-distraction coping when dealing with the stress by cooking, watching television, reading, playing and other activities in order to distract them from the stressful event. Though this coping seemed beneficial, it was only useful for a short time. In terms of long-term solutions, it did not solve the problem that causes stress.

Behavioural disengagement was another dysfunctional coping that stressed patients used. It was the person's action in response to the negative stimuli by not acknowledging the stimuli. Thus, behavioural disengagement reduces one's effort to deal with the stress or, even giving up the effort to accomplish objectives with which the stressor is interfering. This is because when people lose hope in something they have a tendency to avoid the problem that arises. This will eventually cause more stress when the outcome is not favourable.

The use of the venting coping is associated with worse psychological quality of life (Vosvick *et al*., 2002). Women tend to use dysfunctional way of venting when coping with stress (Cheour, 2010). Women can easily express their tension to someone who is close to them. This is due to the feminine-related behaviour that women practiced since childhood. Thus, it explains why women are more responsive toward stress (Maeng, Waddell and Shors, 2010).

Denial can cause negative psychological and physical well-being (King and Minner, 2000). People who are using denial coping strategy may deny themselves from seeking assistance from others and it is associated with poor adjustments of their life (Compas *et al*., 2012). The use of denial coping may also lead to delay in seeking medical care in response to various health symptoms (Sanderson, 2004). Findings in this study revealed that one of the respondents used denial coping by pretending that she had no problem. It is possible for her to delay the treatment regime as she pretended that she is in a good medical condition without any problem, but throughout the interview, she has complained about the limitations to her activities due to health complications.

Apart from that, self-blame is a dysfunctional coping skill which inhibits the healing process from stressed state. Respondents who use self-blame strategy could easily get stressed and depressed. This is because they will continue to suffer guilt that would prevent them from becoming positive and resuming life in a better-manner. Self-blame coping strategy leads patients into depression more readily than other types of coping as they assume that they are responsible on what had happened (Norhayati *et al*., 2013). Women tend to blame themselves over something unpleasant that happened either related to a disease or task. They often feel guilty when they are unable to perform house chores or carry family responsibilities more effectively. Other researchers suggested that women's feeling of guilt is due to their inability to perform their expected family roles which often lead to depression (Escalante, del Rincon and Mulrow, 2000).

Certain dysfunctional coping could indirectly resulted in harm for patients, but in long term, it gives negative results. Thus, it was considered as a mal

adaptive coping that did not give benefit when utilised.

Emotion-focused coping

Acceptance, religion and emotional support were used by the stressed patients and they were considered as emotion-focused. Lazarus and Folkman (1984) noted that the emotion-focused is effective when the problems are beyond the person's personal control such as complication of diseases. Thus, it is considered as an adaptive coping that can be used in certain situation. The usages of these three coping strategies in this study were closely related to the patients' socio background. Most of the respondents comprised of Malay Muslim women who were religiously pious. Positive religious beliefs help patients to accept the reality of the problems that can cause stress (Akhbardeh, 2011). Emotion-focused coping can be effective in certain cases that are related to emotion. Lazarus & Folkman (1984) suggested that coping strategies of emotion-focused is effective when the problem are beyond personal control such as the complication of diseases. The acceptance drives the patients to focus on achieving certain possible goals without ignoring the problems and the limitations in their life. Study on people with chronic illness recommended that patients may achieve better adjustment to chronic pain if they reduce their avoidance and other attempts to control pain, by accepting it and directing their efforts toward goals that they can achieve rather than focusing on the problem (McCracken, 1998). Meanwhile, higher level of emotional support can enhance resilience to stress (Ozbay *et al*., 2007) as well as make us feel loved and cared for. Such strategy can bolster our sense of self-worth by providing positive feedback (Seeman, 2008).

Problem-focused coping

Other than negative coping, stressed patients also practiced on problem-focused coping. Problem-focused is a beneficial coping style as it focuses on how to settle the problem that has arisen. In this study, active coping and instrumental support were used in which they pushed for better results especially for people with chronic illness in maintaining or improving their health. Three subthemes of compliance to treatment were prescribed, compliance to dietary advice and seeking for alternative traditional treatment were helpful in controlling metabolic function especially among MetS patients. In this study, there were patients who took the medication wrongly as it could affect the effectiveness of coping. Meanwhile, some of them have actively taken alternative treatment without considering its long term effects. In that case, we should consider the use of active coping since it is sometimes used by mistake and can influence the effectiveness of the treatment. As a consequence, it reduces the quality of health.

Additional themes

Avoidance, physical intervention and emotion suppression were additional themes which were not included in the brief COPE. Avoidance of coping tends to minimize the factor that can cause stress and view it as the matter that should be neglected. It is good to ignore the stress for a short period of time in order to calm the situation down. However, it was not good to avoid the problems for a prolonged time as the problems could not be settled. The ineffectiveness of avoidance was proven whereby patients who used avoidance in dealing with pains have greater functional disability over three years (Evers *et al*., 2003). It appears in some cases that by using avoidance as coping, it could cause symptoms of different psychological and health problems (Tuncay *et al*., 2008).

Physical intervention however, is a productive coping (Serlachius *et al*., 2011) that resulted in good body weight, improved quality of life (Ogden, 2004) and was a stress reliever (Huberty *et al*., 2014). Other than that, stressed patients also used emotional suppression, which is non-productive coping strategies (Serlachius *et al*., 2011). They felt reluctant to discuss and share their problems with others whom they perceive to have less understanding of the matter raised. Besides, they perceived that their matters were private and inappropriate to be shared with others.

NURSING IMPLICATION

Nurses are front-liner health care providers who play an important role in enhancing patients' health by promoting good quality of life. This could be achieved through being free from stress or being able to control the stress. Through good health education on stress and coping, nurses can help patients to better manage their stress by choosing good coping strategies. Good coping strategies enhance the releasing of stress. Thus, the quality of mental and physical health can also be improved.

CONCLUSION

In conclusion, it is worthwhile to state that this analysis has identified the coping styles employed by stressed metabolic syndrome patients in two clinics in Universiti Sains Malaysia in Kelantan. The stressed

patients used dysfunctional coping more frequently compared to emotion-focused and problem focused coping. This type of coping cause the feeling of stress to remain in the patients Problem-focused coping should be encouraged but these may be unreliable with the respondents' norms (DeCoster and Cummings, 2005). Due to that, emotion focused should be considered especially when dealing with complication brought about by diseases. Due to that, the patients would feel more at ease confronting the burden that they faced if the health care providers could help them in managing their stress. The health care professionals must support stressed metabolic syndrome patients by giving advise and guiding them with useful and relevant coping styles that can reduce their stress level thus increase their quality of life.

LIMITATIONS

Our qualitative study of fifteen patients with MetS was one of the first in Malaysia to explore coping strategies of individuals experiencing MetS. Although the results of this study cannot be generalized to other populations, they do provide healthcare professionals with important information about this group's life experiences and needs.

CONFLICT OF INTERESTS

The authors declared that there is no conflict of interests regarding the publication of this paper.

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