

Health Behaviour, Family Function and Depression of Middle-aged Men

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Abstract

Background/Objectives: Middle aged men are confronted with unstable state, physically and psychologically. This study was confirmed the correlation among health behaviour, family function, and depression on them, which has been underestimated. **Methods/Statistical Analysis:** Convenience sampling was performed for selection of 190 middle-aged men residing in a large city. The sample size was estimated to be ≥ 110 using the G Power 3.1 program with the significance level of .05, the effect size of .3, and testability of .95. Of 220 questionnaires completed, 190 were used in analysis, with the exception of those with poor responses. **Results:** Statistically significant positive correlation was found between the subjects' health behaviour and family functions ($r = .510, p < .001$) and statistically significant negative correlation was found between their health behaviour and depression ($r = -.473, p < .001$) and between their family functions and depression ($r = -.529, p < .001$). Stepwise regression analysis was performed to determine the factors affecting depression of the subjects and the results are summarized in Table 3. Regarding goodness-of-fit of the regression model, F-value was 47.256, which was statistically significant ($p < .001$). R² value was .329; that is, explanation power for the level of anxiety regarding death was 32.9%. The variables having a statistically significant impact on depression of the subjects were health behaviour ($\beta = -.275, p < 0.5$) and family functions ($\beta = -.388, p < 0.5$). **Conclusion/Application:** Putting the results together, depression of middle-aged men must not be underestimated any longer and systematic intervention should be made in their socio-psychological problems as an effort to lower the level of their depression; for example, by maintaining and promoting positive health behaviour and by developing a mental health program for the whole family.

Keywords: Depression, Family Function, Health Behaviour

1. Introduction

While middle age is characterized by reflection and inner maturity, it is a turning point at which one makes behavioural and conscious changes, goes through a remarkable process of individualisation, is confronted with some negative aspects of life, such as disease and aging, and may become disappointed and confused. Physical aging begins during this period of life; consequently, middle-aged people can assess themselves negatively due to limited self-respect, a sense of worthlessness, and poor self-confidence, causing mental crisis, which may involve anxiety and depression¹¹. In particular, for men

middle age is the prime time of life, when they combine their abundant experiences with their abilities; however, they may become stressed out, both physically and psychologically, due to heavy responsibilities and anxiety about competition with younger generations in their career¹⁴.

Such a serious level of stress, which is prevalent among middle-aged men, is reportedly very likely to be manifested in depression¹⁴ and middle-aged men may experience both physical changes and psychological symptoms, such as depression, anger, and anxiety, similar to how middle-aged women may experience menopausal symptoms¹⁴. The Ministry of Health and Welfare reported

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that 80% of middle-aged men experienced a sense of crisis involving emotional confusion, frustration, and wandering and were 2.65 times more likely to commit suicide than women of the same age¹⁰.

Men have culturally concealed their depression due to the belief that they should be strong⁶; in particular, they have expressed their depression poorly in Korean culture, rarely permitting emotional expression⁸. Middle-aged men confronted with diverse physical and psychological problems require regular health behaviour and a positive support system in order to alleviate the sense of crisis^{12,13}. The aim of this study is to understand the relations among health behaviour, family functions, and depression of middle-aged men and to identify the factors affecting their depression.

The aim of this study is to understand the relations among health behaviour, family functions, and depression of middle-aged men and to identify the factors affecting their depression. It has the following objectives:

1. To identify the general characteristics of the subjects.
2. To determine the subjects' health behaviour, family functions, and levels of depression.
3. To understand the relations among health behaviour, family functions, and depression of the subjects.
4. To identify the factors affecting depression of the subjects.

2. Methodology

2.1 Study Subjects and Ethical Consideration

This study is a descriptive research, which aims to understand the relations among health behaviour, family functions, and depression of middle-aged men and to identify the factors affecting their depression.

Convenience sampling was performed for selection of 190 middle-aged men residing in a large city. The sample size was estimated to be ≥ 110 using the G Power 3.1 program with the significance level of .05, the effect size of .3, and testability of .95. Of 220 questionnaires completed, 190 were used in analysis, with the exception of those with poor responses.

2.2 Research Variables

2.2.1 Health Behaviour

Health behaviour refers to individuals' action to control their own health, maintain and promote their functions¹⁶. It was measured using the health behaviour assessment instrument developed by Choi and Kim⁵, which is a four-point scale consisting of 33 items in total. The scores range

from 33 to 132, the higher the score, the higher the level of health behaviour. Regarding reliability of the instrument, Cronbach's $\alpha = .91$ at the time of its development and .93 in this study.

2.2.2 Family Functions

Family functions refer to family behaviour or dynamics, which is necessary to keep the system intact and lead it in a predictable direction in order to achieve a family goal, and involve family bond and adaptability from the systematic perspective⁹. They were measured using the family function assessment instrument for Koreans developed by Choi³. This instrument is a five-point scale consisting of 40 items in total with scores ranging from 40 to 200; the higher the score, the higher the level of family functions. Regarding reliability of the instrument, Cronbach's $\alpha = .93$ at the time of its development and .92 in this study.

2.2.3 Depression

Depression refers to the state involving anxiety or a sense of melancholy, failure, helplessness, or worthlessness, which is accompanied by physiological conditions as well as by normal mood swings², and was measured using the contracted form of Seikh and Yesavage's¹⁷ depression scale, which had been used by Kim, Chae, Jeon, and You⁴. This is a dichotomous scale (1 Yes, 0 No) consisting of 15 items in total with scores ranging from 0 to 15; the higher the score, the higher the level of depression. Cronbach's $\alpha = .83$ in Choi⁴ and .79 in this study.

2.3 Method of Data Analysis

Data were collected from September to November 2013. The participants were given an explanation of the goal and contents of the research and were informed that they could withdraw their participation anytime during the process of data collection. They were asked to provide written consent for spontaneous participation in the research before collecting data.

The collected data were processed using an SPSS/PC program (SPSS, Inc., Chicago, IL); the significance level α was .05 for two-sided statistical test, which was performed as follows:

ical test, which was performed as follows:

The real number, percentage, mean, standard deviation, minimum, and maximum were estimated for the subjects' general characteristics, health behaviour, family functions, and levels of depression.

Pearson's correlation analysis was performed to determine correlation among health behaviour, family functions, and depression of the subjects.

Stepwise multiple regression analysis of the variables was performed to determine the factors affecting depression of the subjects. Multicollinearity test and residual analysis of independent variables were performed for regression analysis and all of them were found to be met.

3. Findings

3.1 General Characteristics

One hundred one persons (53.2%) had a religion; 79 (41.6%) were high school graduates, 95 (50%) had a college diploma, and 16 (8.4%) were middle school graduates or at lower educational levels; 178 persons (93.7%) had a spouse; 75 (38.9%) were company employees, 64 (33.7%) were self-employed, 10 (5.3%) were farmers or fishermen, eight (4.2%) were teachers, and 34 (17.9%) others; 125 persons (65.8%) lived with their spouse, 38 (20%) lived alone, 17 (8.9%) lived with their married child, and 10 (5.3%) lived with their unmarried child; 165 (86.8%) persons were satisfied with their financial status and had no disease (Table 1).

3.2 Correlation among Health Behaviour, Family Functions and Depression

Results of correlation analysis among health behaviour, family functions, and depression of the subjects are shown in Table 2. Statistically significant positive correlation was found between the subjects' health behaviour and family functions ($r = .510$, $p < .001$) and statistically significant negative correlation was found between their health behaviour and depression ($r = -.473$, $p < .001$) and between their family functions and depression ($r = -.529$, $p < .001$).

3.3 Factors Affecting Depression

Stepwise regression analysis was performed to determine the factors affecting depression of the subjects and the results are summarised in Table 3. Regarding goodness-of-fit of the regression model, F-value was 47.256, which was statistically significant ($p < .001$). R^2 value was .329; that is, explanation power for the level of anxiety regarding death was 32.9%. The variables having a statistically significant impact on depression of the subjects were health behaviour ($\beta = -.275$, $p < 0.5$) and family functions

($\beta = -.388$, $p < 0.5$).

The higher the score for depression, the lower the score for health behaviour and family functions; the better the subjects' health behaviour, the better family functions they had. The factors affecting depression of the subjects were health behaviour and family functions.

The hormonal level for men reaches its peak in their twenties and begins to drop by 2% per year at the age of 35. If the level drops below the average level, it can cause some problems, including depression, anxiety, and a feeling of helplessness, as well as hypoandrogenism. Hypoandrogen depression, which is not emotionally expressed, unlike menopausal depression, is rare, but it has been reported universally¹⁴. According to Harr⁶, depression for men has been neglected by mental health professionals and its prevalence has been underestimated.

More than half of chronic diseases in adults, including hypertension and diabetes, are caused by unhealthy living habits. Although diverse types of health information and services are provided to revise their unhealthy living habits, alcohol intake and smoking are still on the steady increase, so are chronic diseases, among Korean adults¹⁵. Most adults tend to neglect health behaviour because they believe that they are less likely to suffer from disease or physical risks than others¹⁵. Since practicing health behaviour can prevent disease, improve physical and psychological health status, and extend the duration of healthy living⁷, development of diverse programs that can promote health behaviour is necessary in order to prevent depression among middle-aged men.

Middle-aged men take more interest in their family than in their work in order to obtain psychological satisfaction¹⁰ and social support, including family support, can reportedly affect their depression^{1,18}. Family is capable of solving any problem situation through joint efforts to overcome crisis or adversity and to recover and develop family tension¹⁰. Reinforcing the family functions is expected to help middle-aged men stabilise their emotional state, which may involve depression, because men begin to recognize the importance of family at middle age.

As some researchers reported that limited family support resulted in less revision of health behaviour⁷, development of a nursing intervention that can promote family support and health behaviour is necessary in order to reduce depression among middle-aged men since health behaviour can improve and promote physical and psychological health status.

4. Acknowledgment

This study is a descriptive research, which aims to understand the relations among health behaviour, family functions, and depression of middle-aged men and to identify the factors affecting their depression. The research was conducted in 190 middle-aged men residing in a large city and the following results were obtained:

- Statistically significant positive correlation was found between the subjects' health behaviour and family functions, and statistically significant negative correlation was found between their health behaviour and depression and between their family functions and depression.

- Stepwise regression analysis, which was performed in order to determine the factors affecting depression of the subjects, found that explanation power for the level of depression was 32.9% and that the variables having a statistically significant impact on their depression were health behaviour and family functions.

Putting the results together, depression of middle-aged men must not be underestimated any longer and systematic intervention should be made in their socio-psychological problems as an effort to lower the level of their depression; for example, by maintaining and promoting positive health behaviour and by developing a mental health program for the whole family.

Table 1. General characteristics of subjects (N=190)

Characteristics	Categories	N (%)
Religion	Have	101 (53.2)
	Not have	89 (46.8)
Education	Middle school(a)	16 (8.4)
	High school(b)	79 (41.6)
	University(c)	95 (50.0)
Spouse	Yes	178 (93.7)
	No	12 (6.3)
Job	Company employee	74 (38.9)
	Business	64 (33.7)
	Teacher	8 (4.2)
	Agriculture& Fishing	10 (5.3)
	Others	34 (17.9)
Family	Alone	38 (20.0)
	With partner	125 (65.8)
	With married sons & daughters	17 (8.9)
	With unmarried sons & daughters	10 (5.3)
Economic status	Satisfaction	165 (86.8)
	Dissatisfaction	25 (13.2)
Disease	Have	25 (13.2)
	Not have	165 (86.8)

Table 2. Mean scores and range for health behaviour, family function, and depression (N=190)

Variables	M (SD)	Min.	Max.	Possible range
Health behaviour	2.99 (0.38)	1.94	4.00	1 - 4
Family function	3.77 (0.50)	2.73	7.88	1 - 5
Depression	4.24 (3.36)	0	13.07	0 - 15

Table 3. Correlation among health behaviour, family function, and depression (N=190)

Variables	r (p)		
	a	b	c
Health behaviour(a)	-		
Family function(b)	.510(p<.001)	-	
Depression(c)	-.473 (p<.001)	-.529 (p<.001)	-

Table 4. Predictors of depression (N=190)

Variables	B	β	t	P
Health behaviour	-2.447	-.275	-3.974	.000
Family function	-2.624	-.388	-5.604	.000

R = .579, R² = .336, Adjusted R² = .329, F=47.256, p<.001

Independent variables: health behaviour and family function

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