

Original Paper

Relationships between Spirituality, Health Self-efficacy and Health Locus of Control in the Elderly

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Abstract

The purpose of this study was to clarify the relationships between spirituality, health locus of control and health self-efficacy. A questionnaire survey was administered to elderly people living at home, and 696 valid responses were collected and analyzed. The subjects' mean age was 74.0 ± 5.2 years. Using a causal model to analyze the relationship between spirituality, health locus of control and health self-efficacy, data fitness to the model was evaluated by structural equation modeling. As a result, the validity of a model in which health locus of control affects health self-efficacy and spirituality while health self-efficacy enhances spirituality was confirmed. However, the nature of the relationship between health locus of control and spirituality and health self-efficacy differed according to the characteristics of health locus of control. In addition, there was a positive correlation between health self-efficacy and spirituality regarding "significance and objectives of life", "harmony with others", "belief", and "union with nature". In order to support for the spirituality of the elderly, the author suggests that strategies to improve the health self-efficacy for basic health control behavior are useful.

Introduction

In addition to the physical, mental, and social aspects previously indicated, spirituality has recently been emphasized as a factor influencing health. Concepts of spirituality vary and the entity is difficult to comprehend for Japanese, therefore, finding a satisfactory definition has proved problematic [1, 2]. However, according to previous studies [3], spirituality may be associated with human dignity and quality of life (QOL). Among the above 4 health-related factors, the following findings have been accumulated: in persons whose spiritual needs are more strongly satisfied the QOL is higher [4] and spirituality increases a subjective sensation of happiness [5]. In addition, Blazer [6] indicated that health balance was maintained by focusing on a spiritual task at an advanced stage of geriatric development, a stage reported by Erikson as one normally characterized by "despair and integration". Thus, spirituality is an important entity when assessing elderly people's health. It may maintain and promote health through a sense of purpose associated with having a spiritual task at an advanced age, thus improving an individual's QOL and leading to happy aging.

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We all desire happy aging and “basic satisfaction with oneself” is a factor involved in this [7]. This sense of satisfaction involves confirming “the existence and significance of oneself”, and functions by providing “something to live for”. The existence and significance of oneself are realized by independence and productivity, that is to say, “doing useful things” in daily life [8]. However, age- or disease-related psychosomatic decline results in difficulties in daily life, leading to various “impossible” and unacceptable experiences in elderly people. Such experiences affect the self’s existence and sense of significance, magnifying spiritual needs. Essentially, humans lead an autonomous existence; therefore, the self’s existence and significance depend on a freedom to determine how to live by oneself [8].

Factors involved in a sensation of happiness vary among individuals. However, a study indicated that the degree of health was one of the main factors influencing a subjective sensation of happiness [7], suggesting that health is an important means to realizing happy aging. For this reason, elderly people are more markedly interested in their health compared to young persons, and thus perform health activities in daily life [9].

Factors associated with the completion of health activities include health self-efficacy and health locus of control. The former represents a sensation that concrete health management activities can be accomplished. Persons with high-level health self-efficacy can perform health activities easily [10]. The latter indicates a personal interpretation regarding the reasons for and causes of health and disease.

In Japanese, the reasons for health and disease are classified into 5 categories: “internal”, “supernatural”, “chance”, “family”, and “professional” [11, 12]. Persons with a tendency toward internal control believe the reason for health belongs to “internal” factors and show a high-level of health self-efficacy, contributing to the completion of health activities [13-15]. How these health activities are accomplished depends on the individual’s value system (categorization tendency). We can infer that this system indicates the individual’s “value consciousness” for accomplishing health activities. Simultaneously, this “value consciousness” may also be closely associated with an object the individuals are interested in and with which they have a relationship that provides “something to live for”.

Thus, it may be useful to clarify the relationship between the spirituality of elderly people, their health self-efficacy and their beliefs about health locus of control, in order to establish guidelines to improve the QOL of elderly people. However, few studies have investigated the existence of these relationships and what their nature might be.

In this study, we examined the relationship between the spirituality of elderly people, their health self-efficacy and health locus of control using structural equation modeling to obtain basic data in order to review guidelines for QOL improvement in elderly people.

Methods

1. Definition of terms

Spirituality is a factor influencing health. It molds the psyche of human beings, improving their quality of life and mental health. All humans have a sense of spirituality. When people are faced with critical situations, it is recognized. It provides a purpose in life established as a supernatural force beyond oneself, others, nature surrounding the self, or the self’s inner aspects.

Spiritual needs are what is needed in order to pursue your spiritual purpose in life.

Spiritual task in old age is a set of attitudes that help one to live positively and accept oneself despite a negative state such as aging, disease-related and physical, mental, and social inconveniences. It includes facing the developmental task of “despair and integration”, indicated by Erikson.

Spiritual well-being is the affirmation of one’s own life via relationships with a supernatural force, others,

nature, and the self's inner aspects. A feeling derived from spiritual task.

2. Survey methods

We administered a questionnaire survey to elderly people living at home (members belonging to the Senior Citizens Club and Silver Talent Center) aged 65 years or older in cities B and C, in prefecture A. We requested the staff working at the Senior Citizens Club and Silver Talent Center in the two cities to deliver and collect a questionnaire; 1,500 questionnaires were delivered, and responses were collected from 991 persons (collection rate: 66.1%). Of these, we analyzed 696 valid responses to question items regarding gender, age, the Spirituality Health Scale for Elderly people (Spirituality Health Scale), Health Self-efficacy Measure Scale (HSEMS), and Health Locus of Control (effective response rate: 70.2%). The survey period was from February until May 2007.

3. Survey contents

3. 1. Subject characteristics

We collected data concerning gender, age, family members, religion, subjective health, and the presence or absence of help from others in daily life.

3. 2. Spirituality

Using the Spirituality Health Scale (Table 1), we surveyed spirituality. This is a scale for determining the spirituality of elderly Japanese persons, consisting of 6 views (18 items) related to "significance and objectives of life", "attitude toward death and dying", "self-transcendence", "harmony with others", "belief", and "union with nature". The subjects answered each question using 5 grades: "strongly agree" to "strongly disagree". For scoring, these were scored from 5 to 1 point, respectively. Therefore, a higher score reflects a state of spiritual well-being. We developed the Spirituality Health Scale based on 6 subordinate concepts [5] such as "significance and objectives of life", which were indicated in a previous study [2], in which we reviewed the structure of the spirituality in elderly Japanese persons based on existing research. The internal consistency and validity of constituent concepts of this scale were demonstrated via

Table 1 Spirituality Health Scale for Elderly persons

item
significance and objective of life
X 1 Feelings of gratitude deepen with age.
X 2 The self's existence in this world is significant.
X 3 Every day brings joy and a desire to live.
self-transcendence
X 4 I feel connected with my forefathers and descendants.
X 5 Some great, invisible force keeps me alive.
X 6 I am supported by my deceased family members and forefathers.
harmony with others
X 7 I try to accept everyone.
X 8 There are opportunities and places to talk with others about my thoughts/feelings deeply.
X 9 I sometimes feel that I could reconfirm the significance of my life by talking about previous experiences/thoughts with others.
belief
X 10 I am calmly living by maintaining a favorable human relationship with familiar persons (family, friends, and acquaintances).
X 11 The human relationship is smoothly maintained by expressing considerations and thanks to others.
X 12 A relationship with an important person provides support for my life.
union with nature
X 13 In nature, I feel I am part of it and it gives me strength.
X 14 I have been impressed with the beauty of nature.
X 15 A beautiful world gives me feelings of peace and joy.
attitude toward death and dying
X 16 I am not afraid of death.
X 17 Usually, I talk about life and death with my family.
X 18 Concerns I have will be resolved before death.

an analysis using Cronbach’s α reliability coefficient and confirmative factors in 532 elderly people living at home.

3. 3. Health Locus of Control

When measuring the health locus of control, we used a questionnaire based on a scale reflecting viewpoints on health and disease in Japanese, prepared in reference to Horike’s Japanese version of the Health Locus of Control Scales (JHLC) [11, 12]. This questionnaire (HLC) consists of 5 concepts (15 items): “internal: oneself”, “supernatural: a force beyond oneself such as God, Buddha, and curses”, “chance: chance or destiny”, “family: family members and familiar persons”, and “professionals: specialists such as physicians” (Table 2). The subjects answered each question using 5 grades: “strongly agree” to “strongly disagree”. For scoring, these were scored from 5 to 1 point, respectively, and the total score per subordinate concept was calculated.

Table 2 Japanese-version Health Locus of Control Scale (15item)

item
I (Internal ; oneself)
x 1 Recovery from illness depends on my will.
x 2 I take care of my own health.
x 3 Recovery from illness depends on my efforts.
S(Supernatural ; a force beyond oneself such as God, Buddha, and curses)
x 4 I can be healthy with God’ s help.
x 5 Illness is derived from ancestral connections.
x 6 To be healthy, I should worship my forefathers.
C(Chance ; chance or destiny)
x 7 Recovery from illness depends on my destiny.
x 8 The interval until recovery from illness depends on good/bad fortune.
x 9 I can be healthy owing to good fortune.
F(Family ; family members and familiar persons)
x 10 Recovery from illness depends on help from familiar persons.
x 11 Recovery from illness depends on the presence or absence of persons who encourage me.
x 12 Recovery from illness depends on my family’ s cooperation.
Pr(Professional ; specialist such as physicians)
x 13 I can be healthy owing to advances in medicine.
x 14 The interval until recovery from illness depends on the physician’ s evaluation.
x 15 The interval until recovery from illness depends on the physician’ s skills.

3. 4. Health Self-efficacy

The health self-efficacy was measured using the HSEMS designed by Yokokawa et al. [10], which consists of 1 factor (15 items). This scale was designed to determine feelings of self-efficacy regarding elderly people’s health management activities. It may be useful for examining the relationship between the spirituality of elderly Japanese persons and health self-efficacy. The subjects answered each question using 4 grades: “very confident” to “not confident at all”. For scoring, these were scored from 4 to 1 point, respectively. Therefore, a higher score reflects higher health self-efficacy. Yokokawa et al. verified reliability and validity of the scale.

4. Ethical considerations

Before conducting this survey, the study purpose, methods, and ethical considerations were explained to the staff working at the Senior Citizens Club and Silver Talent Center in cities B and C. They were requested to cooperate with this survey on a voluntary basis. Furthermore, the following points were explained to the subjects in writing: the study purpose and methods, our respect of their right to anonymity, the volitional nature of participation in this survey and the fact that this data would not be used for purposes other than this study. Consent to participate in this study was considered implicit in subjects’ responses. Furthermore, this survey was approved by the Ethics Review Board of our university.

5. Analytical methods

In this study, we investigated factor based structural models of the Spirituality Health Scale, HLC, and HSEMS using a confirmative factor analysis before examining the relationship between spirituality and the health locus of control/ health self-efficacy. We also examined internal consistency using Cronbach’s α reliability coefficient. Subsequently, we investigated the relationship between spirituality and the health locus of control and health self-efficacy using structural equation modeling.

Assuming a causal model (Fig. 1–1), we examined the adaptability of this model to data and the relationship between factors in two steps. Firstly step, we employed the total score per subordinate concept as HLC, the total score of 15 items as HSEMS, and the total score of 18 items as the Spirituality Health Scale (Fig. 1–2). Secondly step, we switched the Spirituality Health Scale to the total score per subordinate concept among the first-step models (Fig. 1–3). Using the assumptions of the model shown in Fig. 1–1, we investigated the adaptability of this model to data and the relationship between factors in two steps. In establishing this model, we applied a unique hypothesis that the health locus of control and health management activities lead to spiritual well-being via health activities, quoting Bandura’s opinion [16] that behavioral theory is developed based on social learning theory. The adaptability of each model to data was evaluated based on χ^2/df , the Goodness of Fit Index (GFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA) [17]. For the above analyses, we used SPSS 11.0J for Windows and AMOS5.0.

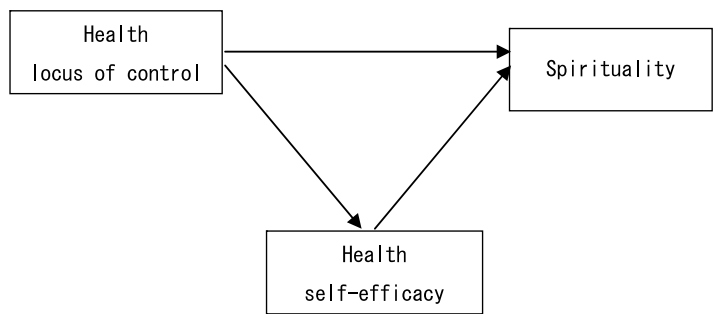


Fig. 1–1 A causal model between Spirituality and Health locus of control, Health self-efficacy

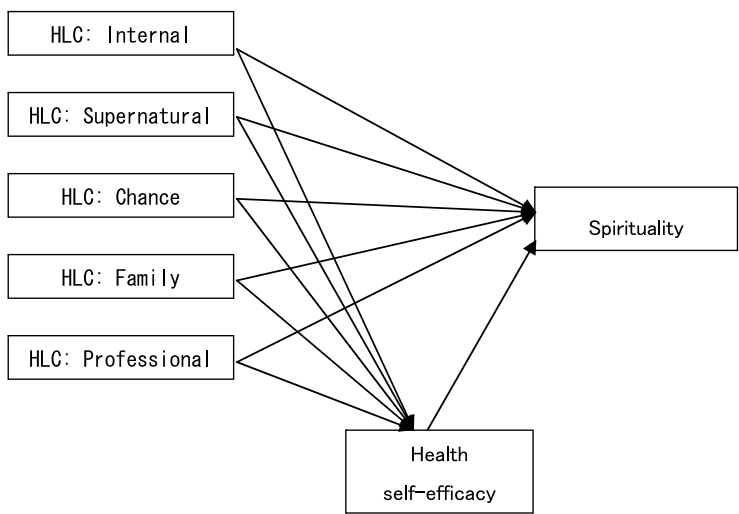


Fig. 1–2 A causal model between Spirituality and Health locus of control, Health self-efficacy (the first step)

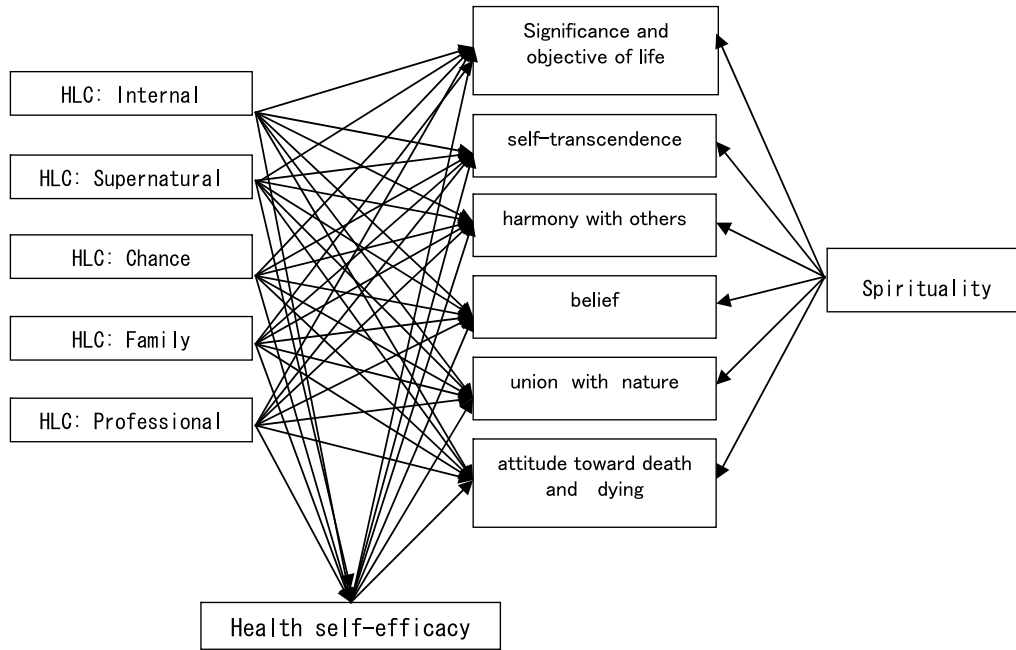


Fig. 1-3 A causal model between Spirituality and Health locus of control, Health self-efficacy (the second step)

Results

1. Subject profiles

The characteristics of the 696 subjects are shown in Table 3. They consisted of 443 males (63.6%) and 253 females (36.4%), with a mean age of 74.0(5.2 years (range: 65–93 years)). Concerning family constitution, 312 subjects (44.8%) lived as part of a married couple, accounting for the highest percentage. Concerning

Table 3 Characteristics of the subjects

		(n=696)
	Characteristic	Number (%)
Gender	Male	443 (63.6)
	Female	253 (36.4)
Age	74.0 ± 5.2 years (65–93 years)	
(Mean ± SD(range))		
Family constitution	Single	70 (10.1)
	Married couple	312 (44.8)
	Oneself(married) and parents	22 (3.2)
	Oneself(married) and single child	84 (12.1)
	Oneself(married) and child's family	187 (26.9)
	Others	15 (2.2)
	Unknown	6 (0.9)
Religion	Nothing	52 (7.5)
	Buddhism	532 (76.4)
	Christian	3 (0.4)
	Shintoist	34 (4.9)
	Buddhism & Shintoist	63 (9.1)
	Others	8 (1.1)
	Unknown	4 (0.6)
Subjective health assessment	Very healthy	34 (4.9)
	Healthy	437 (62.8)
	Not very healthy	205 (29.5)
	Not healthy	18 (2.6)
	Unknown	2 (0.3)
Help of others in daily life	Not necessary	452 (64.9)
	Hardly necessary	191 (27.4)
	Partially necessary	47 (6.8)
	Considerably necessary	1 (0.1)
	Unknown	5 (0.9)

religion, 532 subjects (76.4%) believed in Buddhism. With respect to subjective health assessment, 471 subjects (67.7%) selected “very healthy” or “healthy”, and 223 (32.0%) selected “not very healthy” or “not healthy”. In addition, 643 subjects (92.4%) reported that the help of others in daily life was “not necessary” or “hardly necessary”.

2. Distribution of responses based on the scales and examination of factor based structural models and internal consistency

The results of analysis regarding factor based structural models of the 3 scales that we employed in this study and their internal consistency are shown in Table 4.

Table 4 Test for goodness of fit and Cronbach’s α reliability coefficient

Scale(item number) [Model]	test for goodness of fit				Cronbach’s α reliability coefficient
	χ^2 (df)	GFI	CFI	RMSEA	
Spirituality Health Scale for Elderly(18items) (a 6 factor and a second-order factor model fast-order factors: 6 subordinate concepts second-order factor:spirituality)	478.798(129)	0.925	0.893	0.062	total 0.832 significance and objective of life 0.560 self-transcendence 0.598 harmony with others 0.428 belief 0.782 union with nature 0.765 attitude toward death and dying 0.603
HLC(15items) (5 factor oblique model)	316.441(80)	0.942	0.935	0.065	Internal 0.695 Supernatural 0.726 Chance 0.804 Family 0.814 Professional 0.729
HSEMS(15items) (one-factor model)	662.215(90)	0.879	0.870	0.096	0.908

2. 1. Spirituality Health Scale

Based on assessment using the Spirituality Health Scale (18 items), the mean score was 68.3 points (intermediate score: 54 points), showing a normal distribution involving the mean score at the center. Furthermore, the response rate did not exceed 70% in any item. Concerning the answer distribution, most subjects reported a neutral response in items included in the “harmony with others” and “attitude toward death and dying” sections. However, in the other items, a high proportion of subjects selected “I agree”.

When examining a factor based structural model of the Spirituality Health Scale, each parameter of adaptability met the permissible level. Furthermore, the pass coefficient values were normal and found to be significant ($p < 0.01$). For internal consistency, the α reliability coefficients of some factors were not always favorable. However, in 18 items overall, the value was 0.832, suggesting the internal consistency of this scale.

2. 2. HLC

Concerning HLC (15 items), the response rate did not exceed 70% in any item. Regarding the answer distribution, most subjects selected “I agree” in items included in the “internal” and “family” sections. In items included in the other factors, the responses were variable.

When examining a factor based structural model of HLC (15 items), parameters of adaptability met the permissible levels. Furthermore, the pass coefficient values were normal and found to be significant ($p < 0.01$). In addition, the α reliability coefficient suggested the internal consistency of this scale. The mean scores were 12.0 points for “internal”, 8.9 for “supernatural”, 9.0 for “chance”, 11.6 for “family”, and 10.8 for “professional”. Concerning the score distribution, 3 factors, “internal”, “chance”, and “family”, showed a normal distribution involving the mean score at the center. However, scores for “supernatural” and “professional” were distributed over a range lower than the intermediate score (10.5 points).

2. 3. HSEMS

Concerning HSEMS (15 items), the mean score was 43.6 points (intermediate score: 38.5 points), showing a normal distribution involving the mean at the center. Furthermore, the response rate did not exceed 70% in any item. Regarding the answer distribution, some subjects selected “confident”, and others “not very confident” for the following items: “can always brush my teeth after every meal” and “can utilize facilities / places for exercise in the neighborhood”. However, in the other items, a high proportion of subjects selected “confident”.

When investigating a factor based structural model of this scale, parameters of adaptability almost met the permissible levels. Furthermore, the pass coefficient values were normal and found to be significant (p<0.01). In addition, internal consistency was identified.

3. Relationship between spirituality, health locus of control and health self-efficacy in the elderly

Based on the model presented in Fig. 1-1, we examined the relationship between spirituality, the health locus of control and health self-efficacy using structural equation modeling. Initially, an analysis based on the model shown in Fig. 1-2 showed the presence of non-significant passes. Therefore, these passes were deleted, and an additional analysis was performed. Parameters of adaptability met the levels χ^2 (df)=3.519 (3); GFI=1.00; CFI=1.00; and RMSEA=0.02 (Table 5). Furthermore, the pass coefficient values, other than a “chance” to health self-efficacy value of -0.12, were normal, ranging from 0.09 to 0.28 (p<0.01). The explanation rates in this model were 34.3% for spirituality and 13.2% for health self-efficacy.

Subsequently, we conducted a similar examination based on the model shown in Fig. 1-3 and found that non-significant passes were present. Therefore, these passes were deleted, and an additional analysis was performed. Parameters of adaptability met the levels: χ^2 (df)=96.6 (26); GFI=0.98; CFI=0.97; and RMSEA=0.06 (Table 6). Furthermore the pass coefficient values, other than a “chance” to “belief” (a subordinate concept of spirituality) value of -0.10, were normal ranging from 0.13 to 0.41 (p<0.01). The

Table 5 Association between the spirituality and health locus of control/ health self-efficacy (the first step)

	health self-efficacy	spirituality
	HSEMS	Spirituality Health Scale
health locus of control		
Internal	0.22	0.28
Supernatural	0.09	0.22
Chance	-0.12	-
Family	0.22	0.13
Professional	-	-
health self-efficacy		
HSEMS	-	0.24
contribution rate	13.2%	34.3%
test for goodness of fit: χ^2 (df)=3.519(3), GFI=1.00, CFI =1.00, RMSEA=0.02		
- : non path analysis		

Table 6 Association between the spirituality and health locus of control/ health self-efficacy (the second step)

	health self-efficacy		spirituality				attitude toward death and dying
	HSEMS	Significance and objective of life	self-transcendence	harmony with others	belief	union with nature	
health locus of control							
Internal	0.22	0.20	0.18	-	0.29	0.27	0.16
Supernatural	-	0.13	0.41	-	-	-	-
Chance	-	-	-	-	-0.10	-	-
Family	0.22	-	-	-	0.13	-	-
Professional	-	-	-	-	-	-	-
health self-efficacy							
HSEMS	-	0.37	-	0.27	0.24	0.22	-
contribution rate	12.1%	25.6%	24.3%	7.1%	21.7%	15.4%	2.6%
test for goodness of fit: χ^2 (df)=96.6(26), GFI=0.978, CFI =0.970, RMSEA=0.063							
- : non path analysis							

explanation rates in this model are shown in Table 6; the rate for “significance and objectives of life” was the highest (25.6%) ; overall, the rates were not high.

Discussion

1. Relationship between spirituality, health locus of control and health self-efficacy

In this study, we investigated the relationship between spirituality, health locus of control and health self-efficacy based on a causal model. We found that both the health locus of control and health self-efficacy influenced spirituality. Health self-efficacy was influenced by health locus of control, suggesting the usefulness of this model. However, in this study, the relationship between spirituality and health self-efficacy differed among subordinate concepts of health locus of control. In addition, spirituality influenced by health self-efficacy differed among subordinate concepts of spirituality. We reviewed the relationships between these 3 factors, considering the characteristics of spirituality and subordinate concepts of health locus of control.

Initially, we examined the relationship between spirituality and health locus of control. As shown in Table 5, subordinate concepts of health locus of control influencing spirituality included “internal”, “supernatural”, and “family”. Health locus of control reflects personal viewpoints regarding the causes of disease and promotion of health recovery and maintenance. “Internal” relate to a person’s own mental attitude, “supernatural” refers to the presence of God or other such entities outside of themselves, and “family” is associated with important persons’ cooperation and support; the forces of “self”, “a supernatural force beyond oneself”, and “important persons” are also considered to be valuable. Our previous study [2] showed that, when spiritual task in old age started after the recognition of spirituality, people formed a relationship with and were interested in the “self”, “other persons and environments” surrounding the self, and “a supernatural force” existing beyond oneself. These were consistent with the subordinate concepts of health locus of control, “internal”, “supernatural”, and “family”, respectively. For this reason, these 3 factors may increase an individual’s sense of spirituality. In particular, as shown in Table 6, “internal” most markedly influenced spirituality, and was associated with 5 subordinate concepts excluding “harmony with others”. “Harmony with others”, whose relationship with “internal” was not supported, represents concepts that “reconfirm the significance / purpose of living in close relationships with others / accepting others”. On the other hand, persons who think that health depends on “internal” factors may tend to be interested in the self from the perspective of maintaining their own health by themselves. For this reason, there was possibly no relationship between the two factors.

Secondly, we reviewed the relationship between spirituality and health self-efficacy. There was a positive correlation between the two factors, suggesting that an elevation of health self-efficacy increases spirituality regarding “significance and objectives of life”, “harmony with others”, “belief”, and “union with nature” (Table 6). In this study, spirituality regarding “self-transcendence” and “attitude toward death and dying” was not associated with health self-efficacy. This was possibly because the subjects consisted of elderly people in whom both the subjective degree of health and level of daily life independence were high.

With respect to the relationship between health locus of control and health self-efficacy, subordinate concepts of the former, i.e. “internal” and “family”, were positively correlated with the latter, as shown in Table 6. In previous studies investigating the relationship between the two concepts, health self-efficacy was high in persons who belonged to the “internal” group, those possessing a high sense of internal control [13-15]. This finding is consistent with the results of this study. On the other hand, a subordinate concept of health locus of control, “family”, reflects a viewpoint that important persons’ cooperation and support are emphasized in health management. Put briefly, in the presence of important persons’ cooperation and

support, anyone can prevail. Therefore, in persons belonging to the “family” group, the health self-efficacy may also be high.

Concerning the relationship between spirituality and health self-efficacy, the subordinate concepts of health locus of control, “chance” and “professional”, showed characteristics different from those of the other subordinate concepts (Table 6). “Chance” did not contribute to improvement in health self-efficacy, nor did it act negatively, possibly because the reasons for health and disease were recognized as “destiny or chance” and therefore did not encompass thoughts such as “thanks to someone” or “one’s own health maintained by oneself”. “Professional” was not associated with health self-efficacy or any respect of spirituality, possibly because persons with this factor tended to entrust their well-being to specialists in health management.

2. Issues necessary to support elderly people’s spirituality

In the hypothesis model established in this study, health locus of control and health management activities led to spiritual well-being in their generation of health activities. Although there is a limitation to these findings in that health activities were not measured, the usefulness of this model was demonstrated, suggesting that health locus of control and health management efficacy are related to spirituality.

The subjects of this study consisted of elderly people in whom the subjective degree of health and level of daily life independence were high. In addition, based on the distributions of spirituality, health self-efficacy and health locus of control scores, most subjects showed a strong sense of spirituality, recognized health as their own responsibility, and considered that they could perform health activities by themselves. Therefore, the subjects may not be conscious of spiritual needs in daily life. However, considering developmental tasks in elderly people, “aging” needs to be offset by spiritual tasks. This is not exceptional even in very healthy, elderly people. In addition, in most cases a reduction of the lifespan and quality of life in elderly people is associated with some restriction in daily life. According to a basic survey on national health in 2004 [18], elderly people’s anxiety and stress were most frequently associated with “their own health and disease”, followed by “future nursing” and “family members’ health and disease”. Thus, elderly people with age-related psychosomatic hypofunction may be anxious about how their daily life will be affected and the various changes involved. The results of this study suggest that “an ability to independently perform health management activities”, which provides a means for elderly people to confirm their “self-existence and significance”, although sometimes leading to “anxiety”, contributes to the promotion of very healthy, elderly people’s spiritual task.

These results indicate that, as an issue in the support of elderly people’s spirituality, the importance of health self-efficacy should be recognized, considering that elderly people’s viewpoints regarding health and disease influence their spirituality and feelings of self-efficacy, promoting concrete health management activities in daily life.

Conclusion

In this study, we investigated the relationship between the spirituality of elderly people and health self-efficacy and health locus of control using structural equation modeling. We found that health locus of control influenced health self-efficacy and spirituality. In addition, health self-efficacy improved spirituality, suggesting the usefulness of this model. Furthermore, it was shown that the relationship between health self-efficacy and spirituality differed among inferior entities of the health locus of control. However, health self-efficacy improved spirituality, suggesting that strategies to improve the former are useful for supporting elderly people’s spirituality. This study included elderly people in whom the degrees of health and level of daily life independence were high. In the future, an analysis should be performed with respect to gender

and age, and the characteristics of the 3 factors' relationship should be examined in elderly people in whom the degree of health varies in order to establish a more wide-ranging support system.

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