

Material

Characteristics of “Anchorage” as Spirituality in Three Generations – Analysis by Text-mining –

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1. Introduction

It is said that spirituality is an important aspect of human health, along with physical, mental and social aspects. People are usually not very conscious of spirituality. When people lose their health, or hope for the future, and thereby search for answers regarding “the meaning and purpose of life”, “the meaning of death and misery”, or “life after death”, they perceive a spiritual pain. A prior study involving cancer patients demonstrated that something that one can rely on becomes one’s hope which supports and encourages the individual [1, 2].

In a literature survey conducted by Takeda [3], who clarified the conceptual structure of spirituality in elderly people, “anchorage” was linked to all other concepts, involved in all three domains (self, other/environment, transcendence), and, thus, was an important component of spirituality (Fig.1).

In other words, “anchorage” was thought to support people, and aid them in being themselves and leading better lives, when they are facing spiritual issues.

On the other hand, it has been reported that the formation of spirituality is influenced by various

factors, such as the climate, culture (era), family relationships, experience, education, and religion [4]. It has also been reported that its formation differs among generations [5]. Similarly, “what one can rely on”, which is a component of spirituality, was estimated to differ among generations as well. If different characteristics of “anchorage” among generations are clarified, the assessment of spirituality according to each generation can be facilitated, and, thereby, individually tailored spiritual care can be provided.

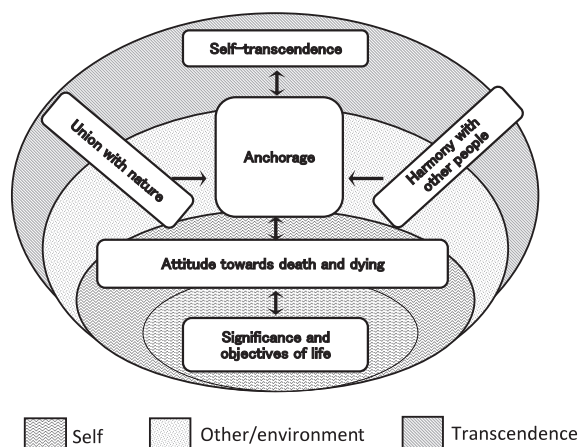


Fig.1 The conceptual structure of spirituality in elderly people

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The purpose of this study was to clarify the characteristics of “anchorage” in younger, middle-aged, and older groups, in order to aid in the provision of spiritual care.

2. Study design

2. 1. Study subjects

Four hundred and fifty-one participants answered a questionnaire (response rate: 67.0%). The participants consisted of hospital office staff, general employees, elderly people who participated in a community health promotion class, and university freshmen in welfare-related departments.

2. 2. Investigation methods

Research assistants distributed questionnaires to hospital office staff and general employees and collected them. For elderly people who participated in a community health promotion class, researchers visited the class to conduct a collective survey. Similarly for university students, researchers performed a collective survey after a lecture. The investigation period was between June and October 2006.

2. 3. Investigation details

Subjects were asked their age, and to write about “what they rely on” to live peacefully.

2. 4. Statistical methods

Subjects were divided into three generational groups according to their age: younger (18-29 yrs), middle-aged (30-59 yrs), and older (60 yrs or older).

The answers regarding “what subjects rely on” were separated by text mining. Signs, punctuation, and postpositional particles were removed. Terms signifying the same object were converted into the same single word. For terms that were used twice or more, we performed correspondence analysis with the three generational groups as variables, constructed cross-tabulation, and implemented a frequency-based significance test. WordMiner 1.1 was used for all analyses.

2. 5. Ethical considerations

Subjects were informed of the study objective and methods in writing. It was explained that participation was voluntary; questionnaire responses would be used for statistical analyses anonymously, without the subject being identified; and data would not be used for purposes outside the study’s objective. A response to the questionnaire was interpreted as consent to participation. The study researchers had no connection with any university department in which the student respondents were studying. The questionnaire survey was conducted after a lecture, with considerations being made to avoid causing any inconvenience to students or any detrimental effects on their study. The ethical committee of Okayama Prefectural University approved the study before research commenced.

3. Study results

3. 1. The number and age range of subjects

The total number of subjects, excluding those non-responses, was 451: 176 in the younger (age range: 18-29 yrs, mean: 19.3 yrs), 139 in the middle-aged (age range: 30-59 yrs, mean: 47.6 yrs), and 136 in the older (age range: 60 yrs or older, mean: 70.8 yrs, MAX: 91 yrs) groups.

3. 2. Text mining of “what subjects rely on”

The answers regarding “what subjects rely on” were separated into terms, with deletions and conversions being made. As a result, the number of terms used more than once was 910, with 158 different types of terms being used. Examples of the terms and the frequencies of use are as follows:

The most common answers were: “family” (137), “friends” (60), “people” (38), “health” (37), and “myself” (34).

Table 1 Components with a frequency of five times or more regarding “anchorage” in three generations

Younger group		Middle-aged group		Elderly group	
Family	(50)	Family	(48)	Family	(39)
Friends	(45) **	Myself	(16) *	Health	(31) **
None	(16) *	None	(11)	People	(17)
Time	(15) *	Time	(10)	Gratitude	(9) **
People	(12)	People	(9)	Myself	(8)
Myself	(10)	Friends	(7)	Friends	(8)
Boyfriend/girlfriend	(9) **	Nature	(7)	Fun	(7)
Sleep	(8) **	Values	(6)	Nature	(6)
Being alone	(6) *	Home	(6) *	Heart	(6)
Nature	(5)	Children	(6) **	Life	(6)
		Pets	(5) *	Livelihood	(6) *
		Health	(5)	God	(5)
				Life	(5) *

Each figure in parentheses indicates the frequencies of components
 Frequency-based significance test **: p<0.01, *: p<0.05

3. 3. Comparisons of “what subjects rely on” between the three generations

Table 1 shows terms that were used five times or more when answering “what do you rely on”, according to each generation. The term “family” was the most frequent answer in all groups.

Some terms showed significant differences between groups. In the younger group these terms were “friends” (p=0), “boyfriend/girlfriend” (p=0), “sleep” (p=0), “time” (p=0.01), “being alone” (p=0.01), and “none” (p=0.02); in the middle-aged group, “children” (p=0), “home” (p=0.01), “myself” (p=0.03), and “pets” (p=0.03); and in the older group, “health” (p=0), “gratitude” (p=0), “livelihood” (p=0.01), and “life” (p=0.02).

4. Discussion

“Family” was the most common term in all groups. A family is the smallest group leading daily life together in society. People get married, raise children, and take care of elderly persons. Families have emotional stability based on family love, while performing the roles mentioned above. Yamane [6] described a family as an essential system for human beings. A family protects human beings, and signifies the person’s own home. This view is supposedly in line with “Love/Belonging” in Maslow’s hierarchy of needs [7]. Maslow [8] described how love gives people a self-image, proprioception, and a sense of value regarding love. Love is considered to be a fundamental desire for humans, and related to spirituality.

Yamane [6] also stated that, unlike other kinds of animal, humans maintain a parent-child relationship for life. In the present study, “family” was the predominant answer in all groups, which clarified that family can be relied on in any life cycle.

In the younger group, “friends” (45) were perceived as reliable as “family” (50). These were followed by “none”, “time”, “people”, and “myself”; “boyfriend/girlfriend” showed significant differences (p<0.01). Overall, terms referring to people were often used. Erikson [9] described that, after establishing a reasonable sense of identity, people will be able to achieve intimacy with the opposite sex, or others/themselves in a related manner. It was considered that, based on the identity achieved in adolescence, people begin to rely on themselves and their relationships with others in the first half of adulthood.

The middle-aged group used “family” (48) as the most frequent term, followed by “myself”, “none”, “time”, “people”, and “friends”, meaning that frequently used terms were the same between the middle-aged and younger groups.

Significant differences were observed in some terms (e.g., “home” and “children”) and this characterizes generations that establish a household and raise children. This observation is related to generativity, in

which people have an interest in the establishment of, and education for, the next generation, as noted by Erikson [9]. In other words, “anchorage” is related to developmental tasks in each generation.

The same relationship was present in the older group. Developmental tasks for elderly people were related to “integrity” (i.e., regarding one’s life as meaningful and accepting it, as well as retrospectively evaluating one’s past life) [10]. Significant differences were noted in “health”, “gratitude”, “livelihood”, and “life”, suggesting that their current existence and status are “what they rely on”.

In a study involving cancer patients, their uncertain lifespan triggered interest in spiritual issues [11]. Elderly people are aware that, in the near future, they will require care, and finally die. Therefore, they appear to frequently think about spiritual issues. It was considered that younger and middle-aged people regard “health”, “livelihood”, and “life” as quite normal, but elderly people rely on “gratitude”, which they think they should show in the remainder of their lives.

Also, in the younger and middle-aged groups, compared to the older group, terms referring to something invisible, such as “fun”, “heart”, “life”, “god”, and “nature”, were infrequently used. Particularly, “god” and “nature” are transcendent and beyond human power. Erikson [12] proposed gerotranscendence as Stage nine late in his life. i.e. satisfaction with one’s life will increase through shifting from material/rational to anagogical/transcendent aspects. In this sense, elderly people are able to believe something invisible in order to accept death, through means of overcoming challenges, which they have learned in their lives. It was also considered that, due to their experiences of loss, the fact that they have nothing to lose is “what they rely on”.

5. Conclusion

It has been clarified that the characteristics of “anchorage” are related to intimacy with other persons (e.g., friends and boyfriend/girlfriend) for the younger group; generativity, in which people establish a household and raise children, for the middle-aged group; and “integration: wisdom” (i.e., reflecting on one’s life and accepting it), as well as gerotranscendence in Stage nine, which is a developmental task in one’s life cycle, for the older group. Particularly, the older group was different from the other two groups in that elderly people are influenced by their past experiences and thoughts connected to their remaining life, often use terms that indicate their current states, and sometimes use words referring to something transcendent and invisible.

It was demonstrated that the family is “anchorage” in all generations.

It was also suggested that, when providing spiritual care, the subject’s family and developmental tasks in his/her life cycle should be regarded as of major importance.

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