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## Perception of Happiness among Health-related University Students: Q Methodological Approach

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#### **Abstract**

**Background/Objectives**: Happiness is one of the most important values in life. The purpose of this study is to examine perception types of health-related university students on happiness.

**Methods/Statistical Analysis**: A distribution chart of the Q samples was prepared according to the principle of the Q methodology, that is, 34 statements selected by subjects using the Q samples were classified on a 9-point scale. A data analysis was conducted by using the PC-QUANL program.

**Results:** Three types of perception of happiness were identified in the subjects: 'Comfort' (15 persons), 'Self-Contentment' (10 persons) and 'Acknowledgement' (13 persons). The type 1 of this research is the type that explains the most the attitudes of the health-related university students towards happiness and they feel happiness the most when their body and mind are comfortable. The type 2 is the self-contentment type. Although the subjects who belong to this group give importance to looks and their love with opposite works as an important element of happiness, they show an attitude that they don't care much about getting acknowledged by others. The type 3 is an acknowledgement type and the subjects of this group feel the happiest when they receive recognition or gift from others and when they accomplish what others find difficult to do.

**Conclusion/Application:** Perception on happiness of health-related university students varies depending on individual backgrounds and subjective dispositions, measures to improve happiness with various activities are needed.

**Keywords:** Curriculums, Happiness, Health-Related, Perception, Q Methodology

## 1. Introduction

Happiness is one of the most important values in life and there are many people who set it as their goal. However, as there is no absolute standard of happiness, so the experiential perceptions that lead to happiness are deemed to be very diverse. The lexical definition of happiness refers to the feeling of delight from sufficient satisfaction and pleasure in life, or to such a state. Although we have become affluent in terms of materials, the answer to the question 'Have we become happier?' is still unclear. Although we have become socially and economically more advanced, the fact that depression is on the rise and suicide rate gets higher supports the results of preceding researches that the external factors have a limitation in explaining happiness.

Generally, the attitude human beings have toward life sets the direction and determines the meaning of life and we can say that the exploring the perception on happiness of health-related university students equals to finding out their identity as health care professionals. In the same context, the perception on happiness possessed by the individual health-related university students could provide the basic materials in establishing the happiness indexes of happy health care professionals in future. Since happiness is a word which is translated to be the same as a subjective well-being and it is an emotion which differs any worries, when they woke up subjective of research is deemed to be more important than objective aspects in understanding happiness of individuals.

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The purpose of this study is to explore the perception of health-related university students on happiness by investigating the perception types of health-related students on happiness and characteristics of those types by applying the Q methodology, one of the qualitative research methods.

## 2. Subjects and Methods

#### 2.1 Subjects

Both open-ended questionnaires and individual in-depth interviews were conducted on 40 senior health-related students in Gyeongbuk-province in 2014. Among them, data from 38 students were finally analyzed excluding those from 3 students who responded with insincere answers.

#### 2.2 Collection of Data

#### 2.2.1 Q-Population and Q-sample

Q-Population was composed of senior health-related students in Gyeongbuk-province. In order to extract statements of perception on happiness, related literature review, open-ended questionnaire survey and the individual-in depth interviews were performed. The collection of data using open-ended questionnaire was conducted from April to May 2014 on 40 health-related university students through convenience sampling and the questions on happiness were based on physical, psychological and social aspects. The contents of questions contained 4 items of 'in what situation do I consider myself happy?' 'If there is a condition to be happy, what would it be?' 'What kinds of people affect my happiness?' and 'what do you think is the happiness?'

In the process of analyzing and classifying gathered open-ended questionnaires, individual interviews were conducted to gather more intensive data in addition to open-ended questionnaire. 5 health-related university students of Gyeongsangbuk-province were randomly selected by the researcher and the interviews were carried out after explaining the purpose of study and obtaining the consent for the participation in research. The contents of interviews included the above-mentioned questions and the factors related to happiness included the individual internal factors, interpersonal factors, environmental factors, learning activity and supporting factors. Aside from these, total of 138 Q-Population were extracted by gathering data from the preceding researches related to happiness, professional journals and domestic and international journals.

For the selection of Q-samples, prepared Q-population was repeatedly read multiple times until the perceptions on happiness were categorized and classified, from which final 34 Q-samples were selected through review and correction.

#### 2.2.2 Q-Population and Q-sample

Unlike quantitative research, in the Q-methodology, persons become variables and the items refer to samples, and as P-sample grows bigger, many people are concentrated on one factor, distorting the characteristics. This is called as small-sample theory and it is the most ideal when the P-sample is similar to the number of statements of Q-sample. In this study, it consisted of 38 health-related university students in Gyeongbuk-province.

#### 2.2.3 Q-sorting

The distribution map of Q-sample was prepared in accordance with the principle of Q-methodology in which the subjects classifies 34 statements selected as the Q-sample on a 9-point scale according to the importance of their opinions and compulsorily distributes them proximate to normal distribution. The Q-sorting was performed first by reading Q-samples and dividing them into 3 parts, which were positive (+), neutral (0) and negative (-), then, positive (negative) statements were chosen from the most positive and classified from outside (+4, -4) going toward inside and ended at the neutral (0). At this time, the reasons for choosing 4 statements, 2 statements respectively at both ends were jotted down through interviews Table 1.

Prior to the Q-sorting process, the participants were asked to record their personal characteristics and each participant spent 20~30minutes filling in the survey. The coding was scored with 1 point for the most disagreeing statement, 5 points for neutral and 9 points for the most agreeing statement.

#### 2.3 Data Analysis

A data analysis was conducted by using the PC-QUANL program (Van Tubergen, Iowa University, IA, USA), and mean, standard deviation and standard score for each 34 items were calculated. And then, the 34 items were analyzed by using the principal component factor analysis, having the P sample as the axis. Types were selected which

**Table 1.** Distribution of Q-sample card

	(D	(Disagree)			(Neutral)			(Agree)		
Score	-4	-3	-2	-1	0	+1	+2	+3	+4	
No. of card	2	3	4	5	6	5	4	3	2	

were considered as the best among the output results by entering various number of factors with over Eigen value 1.0 as standard.

### 2.4 Formation of Q-type

The result of the Q-factor analysis on participants' subjectivity of the happiness using PC-QUANL program produced 3 types. These 3 factors account for the 41.6% of total variance and small total variance like this case mean that the participants' opinions are widely diverse. In Q-study, however, as the researcher selects to deal with the main views,

the size of the variance doesn't particularly matter. The variance for each type was 23.7% for type 1, 10.4% for type 2 and 7.5% for type 3. With the explanatory power of 23.7%, type 1 is considered as a type that explains the participant's perception on happiness the most Table 2 and 3.

Table 2. Eigen values, variance and cumulative

	Type 1	Type 2	Type 3
Eigen value	9.4750	4.1646	3.0150
Variance (%)	23.69	10.41	7.54
Cumulative (%)	23.69	34.10	41.64

Table 3. Type, demographic characteristics for P-samples

Гуре	Subject's	Factor weight	Sex	Age	Satis-faction with	Reason for entering	Academic	Personality
	No.	score			pocket money	health-related	points	
						university		
1	VAR10	1.9616	Female	23	Satisfied	Success	>80	Medium
(n = 15)	VAR05	1.8395	Female	23	Unsatisfied	Success	>70	Medium
	VAR02	1.3742	Female	23	Satisfied	Success	>75	Extrovert
	VAR18	0.7984	Female	24	Satisfied	Advice	>70	Introvert
	VAR39	0.7708	Male	28	Satisfied	Advice	>90	Introvert
	VAR12	0.5491	Female	22	Medium	Success	>85	Medium
	VAR33	0.5118	Female	23	Satisfied	Success	>70	Medium
	VAR34	0.5004	Female	23	Medium	Success	>80	Introvert
	VAR30	0.3762	Female	24	Satisfied	Success	>70	Medium
	VAR22	0.3001	Female	23	Medium	Success	>80	Medium
	VAR38	0.2979	Male	27	Medium	Success	>85	Medium
	VAR36	0.2921	Male	26	Medium	Aptitude	>80	Introvert
	VAR13	0.2502	Female	24	Satisfied	Aptitude	>80	Medium
	VAR16	0.2336	Female	22	Satisfied	Success	>65	Extrovert
	VAR23	0.1463	Female	24	Medium	Advice	>65	Medium
2	VAR28	1.3451	Female	23	Satisfied	Mission	>85	Medium
(n = 10)	VAR31	0.9052	Female	24	Satisfied	Job	>75	Medium
	VAR03	0.8633	Female	23	Medium	Service	>80	Introvert
	VAR08	0.8394	Female	23	Satisfied	Success	>75	Extrovert
	VAR20	0.7392	Female	23	Medium	Service	>80	Medium
	VAR17	0.7274	Male	26	Medium	Service	>85	Introvert
	VAR11	0.6065	Female	23	Medium	Worthwhile	>80	Extrovert
	VAR06	0.5811	Male	29	Satisfied	Success	>90	Introvert
	VAR24	0.3912	Female	24	Satisfied	Success	>85	Extrovert
	VAR25	0.3716	Male	26	Satisfied	Success	>90	Introvert
3	VAR09	0.6382	Female	24	Satisfied	Advice	>85	Medium
(n = 13)	VAR32	0.6153	Female	23	Medium	Job	>80	Extrovert
	VAR35	0.5563	Female	25	Medium	Success	>80	Medium
	VAR27	0.4291	Female	23	Unsatisfied	Advice	>85	Introvert
	VAR26	0.3923	Male	26	Medium	Success	>80	Medium
	VAR15	0.3634	Male	26	Satisfied	Service	>85	Introvert
	VAR19	0.2223	Male	25	Medium	Job	>85	Medium
	VAR21	0.2162	Female	23	Satisfied	Grade	>70	Introvert
	VAR29	0.1920	Male	24	Satisfied	Aptitude	>80	Introvert
	VAR14	0.1869	Female	23	Medium	Success	>80	Medium
	VAR04	0.1853	Female	23	Medium	Job	>70	Medium
	VAR07	0.1695	Female	23	Satisfied	Job	>80	Medium
	VAR37	0.1362	Male	25	Satisfied	Success	>85	Medium

As the result of investigation on correlations among types, there were low correlations among the types, showing that the types are independent one another. Samples of statements and standard scores are presented in Table 4.

# 2.5 Characteristics and Interpretation by

The subjects of the study consisted of a total of 38 participants - 15 participants for type 1, 10 participants for type 2 and 13 participants for type 3 and the subject with the highest factor weight within each type represents prototype of each type Table 3.

For the subjectivity of the perception on happiness, the characteristics of each type were described centering on the statements to which each subject showed positive or negative agreement and the items with remarkable difference between standard score and mean score in a particular type were the focus of analysis and explanation. Besides, this study referred to observations and opinions at both extremes which were the contents of interview at the time of Q-sorting and the socio-economical background.

**Table 4.** Q-sample and Z-scores according to types

	Z-score				
Q-statement	Type 1	Type 2	Type 3		
	(n = 15)	(n = 10)	(n = 13)		
1. I am happy when travelling.	1.44	1.22	0.10		
2. I am happy when I see movies, TV and show.	0.24	1.17	0.75		
3. I am happy when I am glad with someone else or laughing.	-0.13	-0.39	0.65		
4. I am happy when I meet with good luck.	0.30	0.74	-0.45		
5. I am happy when asleep.	-0.11	-1.52	0.15		
6. I am happy when I am doing activities like exercise, and driving.	0.04	1.52	-0.08		
7. I am happy when I feel I made accomplishment.	0.85	0.61	1.65		
8. I am happy when I receive praise or interest.	-0.48	-0.26	1.49		
9. I am happy when I receive a gift.	-1.07	-1.91	0.35		
10. I am happy when being recognized.	-0.36	-2.08	2.06		
11. I am happy when I hear other people talk.	-1.88	-1.08	-0.52		
12. I am happy when I come to have things I want.	-1.12	0.22	0.21		
13. I am happy when I am healthy.	1.20	0.17	-0.15		
14. I am happy when I get enough sleep.	1.45	0.17	-0.42		
15. I am happy when there is nothing to worry about.	1.51	0.56	-1.00		
16. I am happy when I learn new things.	-1.60	-0.91	-0.12		
17. I am happy when I see nice scenery or the weather is good.	1.23	0.17	-0.93		
18. I am happy when I pray.	-0.90	0.00	-1.92		
19. I am happy because I am satisfied with myself.	0.60	0.91	-1.81		
20. I am happy because I have a career and future plan.	0.16	0.09	-1.76		
21. I am happy because I am satisfied with my appearance.	-1.00	1.47	-1.48		
22. I am happy because I have a family.	1.87	0.78	1.10		
23. I am happy because I love someone.	-0.01	1.86	0.26		
24. I am happy because I can confide worries.	0.52	1.34	-1.07		
25. I am happy when I have appointment I am looking forward to.	1.09	0.39	0.37		
26. I am happy when I have enough time.	0.67	-0.39	-0.15		
27. I am happy when I am economically comfortable.	0.08	-0.04	0.45		
28. I am happy when I help someone.	-0.65	-1.13	0.44		
29. I am happy when shopping.	-1.36	-0.44	0.44		
30. I am happy when I do things that are difficult for others.	-0.43	-0.17	1.26		
31. I am happy at the end of the test.	-0.20	1.39	1.05		
32. I am happy when I eat delicious food.	0.12	-1.69	0.40		
33. I am happy when I meet friends.	0.07	-0.83	0.33		
34. I am happy when playing with pets.	-2.16	-0.95	-1.64		

The types of perception on happiness of subjects produced by these type analysis methods are presented as follows.

#### 2.5.1 Type 1- Comfort Type

General characteristics of subjects who belong to the type 1 are as follows; The number of subjects belonging to the type 1 was 15 out of the total of 38, and 67% of them answered 'success' for the reason why they chose healthrelated university Table 3.

The statements which type 1 strongly agreed to were 'I am happy when there is nothing to worry about', 'I am happy when I get enough sleep, 'I am happy when I see nice scenery or the weather is good'. On the other hand, the statements type 1 strongly disagreed to were 'I am happy when I receive praise or interest, 'I am happy when I hear other people talk, 'I am happy when I do things that are difficult for others Table 5.

The items which type 1 particularly showed big difference from the scores of other types, that is, the items that showed strong agreement with Z value of above 1.00 were in the order of 'I am happy when there is nothing to worry about ( Z value = 1.926), 'I am happy when I get enough sleep (Z value = 1.794), 'I am happy when I see nice scenery or the weather is good (Z value = 1.288)' while strongly disagreed statements with Z values less than -1.00 when compared with other types were in the order of 'I am happy when I receive praise or interest (difference in Z value = -1.495), 'I am happy when I hear other people talk (difference in Z value = -1.256)' and 'I am happy when I do things that are difficult for others (difference in Z value = -1.156)' Table 5.

In type 1, the items the subject number 10 with highest factor weights (weighted factor) most agreed to were 'I am happy because I am healthy' and 'I am happy when I woke up from a deep sleep' whereas the most disagreed items were 'I am happy when I listen to other people's stories' and 'I am happy when I play with a pet. The subject number 9 said that health is the very source of happiness and that when he/ she is sick and can't sleep well, he is unhappy even when he/ she has other things. In addition, he/she stated that he/she doesn't particularly like pets and that although he/she listens well to others but not to a degree that he/she feels happy about it and he/she feels suffocated if it gets too long.

Subjects of the type 1 described physical, psychological and social well-being as the most important factor in perceiving happiness. As this group seemed to feel happiness through their health and well-being, it was named 'comfort type'.

**Table 5.** Distribution of Q-Sample card

Туре	Item No.	Q-statement	Z-score
1	15	I am happy when there is nothing	1.926
(n = 15)		to worry about.	
	14	I am happy when I get enough sleep.	1.794
	17	I am happy when I see nice scenery or the weather is good.	1.288
	25	I am happy when I have appointment I am looking forward to.	1.114
	13	I am happy when I am healthy.	1.045
		I am happy because I love someone.	-1.044
	30	I am happy when I do things that are difficult for others.	-1.156
	11	I am happy when I hear other people talk.	-1.256
	8	I am happy when I receive praise or interest.	-1.495
2 (n = 10)	21	I am happy because I am satisfied with my appearance.	2.635
	24	I am happy because I can confide worries.	1.745
	23	I am happy because I love someone.	1.475
	31	I am happy at the end of the test.	1.267
	19	I am happy because I am satisfied with myself.	1.186
	3	I am happy when I help someone.	-1.357
	9	I am happy when I receive a gift.	-1.479
	4	I am happy when I eat delicious food.	-1.908
	10	I am happy when being recognized.	-3.204
3	10	I am happy when being recognized.	2.337
(n = 13)	9	I am happy when I receive a gift.	1.673
	29	I am happy when shopping.	1.502
	30	I am happy when I do things that are difficult for others.	2 1.290
	5	I am happy when asleep.	1.125
	17	I am happy when I see nice scenery or the weather is good.	-1.618
	18	I am happy when I pray.	-1.720
		I am happy because I have a career and future plan.	-2.039
	19	I am happy because I am satisfied myself.	-2.465

#### 2.5.2 Type 2- Self Contentment Type

The number of subjects belonging to the type 2 was 10 out of a total of 38 and 50% of them answered 'service', 'mission' and 'worthwhile' for the reason why they chose health-related university Table 3.

The items the type 2 strongly agreed to were 'I am happy because I am satisfied with my appearance, 'I am happy because I can confide worries' and 'I am happy because I love someone'. On the other hand, the items the type 2 strongly disagreed to were 'I am happy when being recognized, 'I am happy when I eat delicious food' and 'I am happy when I receive a gift' Table 5.

The items which type 2 particularly showed big difference from the scores of other types, that is, the items that showed strong agreement with Z value of above 1.00 were 'I am happy because I am satisfied with my appearance (Z value = 2.635), 'I am happy because I can confide worries (difference in Z value = 1.745), 'I am happy because I am in love someone (difference in Z value = 1.475), 'I am happy at the end of the test (difference in Z value = 1.267) while the strongly disagreed statements with Z values less than -1.00 when compared with other types were 'I am happy when being recognized by others (difference in Z value = -3.204), 'I am happy when I eat delicious food (difference in Z value = -1.908), and 'I am happy when I receive a gift (difference in Z value = -1.479)' Table 5.

In type 2, the items the subject number 28 with highest factor weights (weighted factor) most agreed to were 'I feel happy at the end of the test' and 'I am happy because I am in love with the other sex' whereas the most disagreed items were 'I am happy when recognized or acknowledged by others' and 'I am happy when I received a gift'. The subject number 28 said that what was most worthwhile as a student was that he/she got good grades as much as he/she tried, when he/she felt the happiest. Meanwhile, he/she stated that he/she thought that one should solve on one's own whatever the problems are and because he/she does what he/she thinks is right, it does not matter whether or not acknowledged by others.

It becomes clear that subjects of type 2 positively perceived themselves as they were. As this group boosts their confidence through this perception and attaches preferential value to loving the opposite sex and learning while it shows relatively free opinions on recognition and judgment of others, it was named 'self-contentment type'.

#### 2.5.3 Type 3- Acknowledgement Type

The number of subjects belonging to type 3 was 13 out of a total of 38, and their reasons for having selected healthrelated university were as diverse as 'advice', 'job', 'success', 'service', 'grade', 'aptitude', etc. Table 3.

The items the type 3 strongly agreed to were in the order of 'I am happy when being recognized', 'I am happy

when I receive a gift, 'I am happy when shopping'. On the other hand, the items the type 3 strongly disagreed to were 'I am happy because I am satisfied myself', 'I am happy because I have a career and future plan, 'I am happy when I pray' Table 5.

The items which type 3 particularly showed big difference from the scores of other types, that is, the items that showed strong agreement with Z value of over 1.00 were 'I am happy when being recognized (difference in Z value = 2.337), 'I am happy when I receive a gift (difference in Z value = 1.673), 'I am happy when shopping (difference in Z value = 1.502), 'I am happy when I do things that are difficult for others (difference in Z value = 1.290) while the strongly disagreed statements with Z values less than -1.00 when compared with other types were in order of 'I am happy because I am satisfied with myself (difference in Z value = -2.465), 'I am happy because I have a career and future plan (difference in Z value = -2.039), 'I am happy when I pray (difference in Z values = -1.720), 'I am happy when I see nice scenery or the weather is good (difference in Z value = -1.618) Table 5.

In type 3, the items the subject number 9 with highest factor weights (weighted factor) most agreed to were 'I am happy when being recognized' and 'I am happy when I have appointment I am looking forward to' whereas the most disagreed items were 'I am happy because I have a career and future plan, 'I am happy when I do things that are difficult for others'. The subject number 9 stated that he/she feels overly joyful and happy when he/she is being loved while he/she expressed vagueness because he/she had no specific plan for future.

Because this group, the youngest one among the three, appears to give much weight to others' interests and compliments but has feeble confidence or lacks supporting foundation for designing the future, it was named 'acknowledgment type'.

#### 3. Discussion

This study was conducted to explore perception types of health-related students on happiness and as the result, they were classified into 3 types, which were named as comfort type, self-contentment type and acknowledgement type.

The type 1 of this research is the type that explains the most the attitudes of the health-related university students towards happiness and they feel happiness the most when

their body and mind are comfortable. They placed greater importance on their own physical and psychological comfort rather than on the acknowledgement of others or the relationship with others when compared with other types. In the testimony of type 1, they stated that they are happy when they don't have any worries, when they woke up from a deep sleep and when they travel and view beautiful scenery, which shows that the subjects of type 1 perceive physical, psychological and social well-being as the happiness. The stress coping method commonly employed by health-related university students have been identified as problem-based avoidance strategies. The subjects of this research chose both extreme coping methods of trying to relieve stress with sleep and to avoid or forget problems with sleep at the same time. This ambivalent choice of type 1 shows that the students have high level of stress while their countermeasures against stress to maintain the physical comfort and emotional balance remain unstable.

As the type 1 appeared to be the type that mostly explains the attitude of health-related university students towards happiness, there is a need to enhance the quality of the students' psychological and social life by developing extracurricular learning or activity programs that can promote the opportunities for leisure activities like sleep, rest and travel because present mental and emotional responses of the students are deemed to be connected with the professional personalities of happy health care professionals in the nature as a happy person of health and medical in future.

The type 2 is the self-contentment type. Although the subjects who belong to this group give importance to looks and their love with opposite works as an important element of happiness, they show an attitude that they don't care much about getting acknowledged by others. They consider their self-contentment more important and being a help to others or spending time with friends is not considered a priority. Generally, young university students are sensitive to their physical images shown to others and their looks are considered as an important resource that determines the self-concept and the value of happiness. The subjects of type 2, however, give importance to looks but they do not wish to be acknowledged by others. The results of other studies that the more conditions there are which enables pursuit of internal self, the more optimistic, confident and quieter attitude a subject maintains partially support perception on happiness of type 2. Like this, positive emotions and self-contentment are related to happy life and promote the sense of happiness.

According to preceding studies, (difference in) living environment and conditions decide only 10% of happiness. That is, the study result that conditions like wealth, health, appearance and position only partially affect happiness supports the perception on happiness of type 2 in this study. Objective conditions of life do not necessarily bring satisfaction and sense of happiness. Therefore, a complements are required to the curriculum of health-related universities regarding the perception of happiness of type 2.

The type 3 is an acknowledgement type and the subjects of this group feel the happiest when they receive recognition or gift from others and when they accomplish what others find difficult to do.

The happiness felt after accomplishing something tend to stimulate the growth needs and enables one to desire for bigger accomplishment and recognition. Thus, the subjects of type 3 are likely to experience more happiness as they pursue personal growth through their ability and work. The meaning of happiness comes from values indwelling the mind triggered by small things of everyday life such as compliment, recognition or a gift from other people that are always near at hand.

The significance of this research is that it presented basic data for the introduction of the notion of happiness and the humanistic fusion to the curriculum of healthrelated university by investigating the perception types on happiness of the health-related university students. Although the influence of the objective indexes like the economic status and external appearance on the feeling of happiness of the health-related university students should not be overlooked, the result of this research that the perception on happiness can be controlled through the self-contentment and inner value system shows the necessity to include the varied viewpoints on happiness of people and health professionals in the curriculums of the health-related university education.

Given the results, of this study that perception on happiness of health-related university students varies depending on individual backgrounds and subjective dispositions, measures to improve happiness with various activities are needed. Future studies are recommended to refer to the characteristics of the three types drawn out in this study when applying the concept of happiness to curriculums of health-related university students.

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