

A Study on the Subjectivity of Nursing Students' Perception of Multiple Children: Q-Methodology ^{1^}

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Abstract

Regarding the global trend of low birth rates and aging population, interest in multi-child families has increased. The objectives of this study are to understand the subjectivity of multiple children perceived by nursing students, to describe the characteristics in each type, and then to understand the categorization of multiple children, by applying the Q-methodology. Total 20 nursing students who performed practice in A university were asked to classify 42 sentences of statements about multiple children. The collected data was analyzed by using the QUANL PC Program. The Q methodology is a principal component analysis using the QUANL program of the PC. It is common to classify types by component factor analysis, analyze the characteristics of each type based on the difference between the standard score and type by item, the difference between the standard score and the average standard score of each type, and the matching item and the standard score result. In the results of this study, the nursing students' perception of multiple children was divided into three factors. The types of subjectivity of multiple children included 'type of perceiving difficulties in rearing multiple children', 'type of emphasizing strengths of rearing multiple children', and 'type of focusing on children of multi-child families'. This study provided the basic data for educating and understanding the nursing students' perception of rearing multiple children in clinical setting.

Keywords— Multiple Children, Nursing Student, Subjectivity, Q-Methodology, Nurses

1. Introduction

1.1. Background

Rearing three children or more is now unusual enough to grab people's attention in Korea[1]. Just as shown in the decreased birth rate in most of the countries for last 30 years, the low birth rate is not just the phenomenon of Korea. However, the pace of low birth and aging in Korea is unprecedentedly fast in the whole world. If this trend is continued, we would face the population change such as decrease in working age population and total population, and also various social problems related to economic growth, welfare, and social integration[2].

In the 2000s, the phenomena like low birth and aging have grabbed attention as national crisis, so the government-wide low birth policy has been established and carried out[2]. Examining the main contents of childbirth encouragement policies enforced by the central government and local governments of Korea, most of them are about support for medical expenses before/after childbirth, payment of childbirth grant, support for childcare cost, and support for educational expenses of multi-child families. However, such encouragement policies have not shown clear effects yet[3, 4], so the causes need to be closely analyzed.

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Examining the population policies or childbirth encouragement policies by local governments of Korea shown in the enforcement plan of local governments, they are still focusing on material support such as childcare cost, childbirth grant, or goods supply. Most of the previous researches analyzing the effects of childbirth encouragement policies in Korea, are reporting that the material/financial support like childbirth grant or support for childcare cost as the main contents of those policies does not have huge effects on the childbirth will or childbirth behavior[3-5]. In other words, the childbirth will is more influenced by values of marriage and childbirth or individuals' psychological characteristics, rather than the perception of childbirth support policies, perception of serious low birth, or childcare support or childbirth grant[5, 6]. Moreover, Min(2013) is reporting that even when having a positive thought of marriage and childbirth, it is not easy to be directly connected to childbirth behavior[6].

In modern times, the image of nurse has been fixed as a job for women, and the nursing was developed focusing on maternalism as one of the characteristics of women[7]. The nursing composed/developed focusing on women could have great effects on the occupation group of nurse, patients, and healthcare workers, beyond an individual female nurse. Also, as they are composed of women, their perception of childbirth and child-rearing is important.

As a core manpower that has the most contact with patients, taking up the greatest part of healthcare site, the nurses should provide the safe and high-quality care to patients within limited time in the rapidly-changing healthcare environment[9]. The subjectivity of perception when handling patients in nursing settings has huge effects on their nursing. Thus, it is important to understand the perception of nurses and preservice nurses.

There are no researches on multiple children targeting nursing students. Thus, the Q-methodology is a methodology that could understand the characteristics of each type according to the subjectivity structure of human, started not from the researcher's hypothesis, but from a performer's perspective[10]. Because the nursing students' perception of multiple children is subjective and unique experiences, the Q-methodology considering the subjectivity of subjects is a proper research method for verifying the nursing students' perception types of multiple children.

Therefore, this study aims to provide the basic data necessary for developing differentiated educational programs according to the characteristics of perception of multiple children in each type targeting preservice nurses before going out to the nursing site where multiple children are successfully shown, by understanding the subjectivity structure in the perspective of nursing students.

1.2. Purpose

The objectives of this study are to provide the basic data for presenting the strategies for educating nursing students, and information about nursing students' perception of multiple children, by examining the types of subjective perception of multiple children and the characteristics of each type targeting nursing students, by applying the Q-methodology. For this, the concrete objectives of this study are as follows.

- The nursing students' subjective perception of multiple children is categorized.

- The characteristics of nursing students' perception of multiple children in each type are analyzed and described.

2. Materials and Methods

2.1. Research Design

To verify the subjectivity of perception type of multiple children perceived by nursing students, the Q-methodology was applied in this study.

2.2. Q-Population and Q-Sampling Selection

The Q-population was drawn through consideration of domestic/foreign relevant literature, open-ended questionnaire, and individual in-depth interview, in order to extract comprehensive statements about multiple children focusing on the current nursing students. After drawing about 180 items of Q-population through this process, and then integrating the collected literature through consideration of domestic/foreign relevant literature, total 50 items of Q-population were extracted. When deciding the size of Q-sample, it could be changed depending on the characteristics of each research. Under the premise in which the samples as many as 20~100 or 40~60 are universal, to find definite meanings of extracted sentences, the repetitive verification was repeated while the personal expression was excluded[11]. Regarding the contents falling under the same topic, the sentence showing the biggest representativeness was extracted. Going through the procedure of reviewing and modifying the extracted Q-sample in this study, final 42 samples with high discrimination were selected[Table 1].

Table I Q Statements

| No. | Statement |
|-----|--|
| 1 | Due to the difficulties in rearing multiple children, the economic burden is huge. |
| 2 | There are many cases of giving birth to multiple children by family's pressure. |
| 3 | Due to the sexual preference, multiple children are born. |
| 4 | Due to like children, multiple children are born. |
| 5 | Due to the increased age of mother by multiple children, it is possible to give birth to a child with disabilities. |
| 6 | The children from multi-child families could become friends to each other, which is a strength of multiple children. |
| 7 | Because of the birth of multiple children, the attitude of parenting becomes relaxed and comfortable. |

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| 8 | The advantage of multi-children is that they can develop social skills within the family. |
| 9 | Children's diversity can be recognized. |
| 10 | Each child has difficulties in forming complete attachment. |
| 11 | If the family is not financially affordable, it is hard to satisfy what the children want. |
| 12 | It is hard to establish a personal space in multi-child families. |
| 13 | It is hard for the children from multi-child families to form their identity. |
| 14 | The multi-children support policies provided by the state are not effective. |
| 15 | The multi-child families have hardship by private education expenses. |
| 16 | Children from multi-child families are easy to adapt to social life. |
| 17 | In multi-child families, the father's role is increasing. |
| 18 | From the third childbirth, it is often voluntary. |
| 19 | The psychological readiness of parents increases. |
| 20 | Multi-child parents can share information through communal childcare centers and church communities. |
| 21 | The parents of multiple children are lacking in time for self-development. |
| 22 | Due to negative images of multiple children like cost burden, the multi-child families are decreased. |
| 23 | There are many cases in which the role burden is weighted to one side in multi-child families. |
| 24 | The multi-child families have increased hours of spending time together with family members. |
| 25 | The social atmosphere should be positive about multi-child births. |
| 26 | The parents from multi-child families cannot avoid career interruption. |
| 27 | The formation of rules in the family has a positive effect on children's behavioral modifications. |

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| 28 | The siblings in the old age could become important support system to each other. |
| 29 | Siblings provide emotional stability and intimacy. |
| 30 | Children from multi-child families can learn competition, consideration and concession. |
| 31 | Generosity and intimacy in multi-child families have a positive impact on the building of children's self-esteem. |
| 32 | The mother from multi-child families regards her children as everything she has. |
| 33 | Multi-child families may have restrictions on travel or social activities. |
| 34 | It is highly likely that the way of talking with children is bilateral. |
| 35 | The parents of multiple children have increased conversation hours between husband and wife. |
| 36 | Parents of multiple children can acknowledge the difference in parenting methods and broaden their mutual concessions and understanding. |
| 37 | Children in multi-child families can become independent beings, away from parental inertia. |
| 38 | The first child could become a cooperator of child-rearing. |
| 39 | The children of multi-child families live confidently and never give up. |
| 40 | Parents of multi-child families have increased physical and psychological burdens. |
| 41 | The quality of interactions between members of multi-child families contributes to individuals' psychological well-being. |
| 42 | There is a need to promote national support for multi-child families. |

2.3. P-Sample Selection Method

The Q-methodology is a qualitative research emphasizing individuals' inertia by focusing on differences in intraindividual importance or semanticity, rather than interindividual differences. The Q-methodology is based on the small sample doctrine which is about when the P-sample gets larger, many people are concentrated in a single factor, and the characteristics are not clearly revealed[12]. As the P-sample of this study, this study selected total 20 nursing students who agreed to participate in this study

after getting sufficient explanation of the research objectives.

2.4. Q-Classification and Data Analysis Methods

The Q-classification process is the process in which the research subjects selected as P-sample make the voluntary definition of multiple children by classifying the statements of Q-sample in the forced normal distribution method[12]. The data was collected by using Q-cards targeting 14 nursing students of OO university. It mostly took 15-20 minutes for each research subject to complete the Q-classification. For the distribution chart of Q-sample, the research subjects classified the statements selected as Q-sample into from strong affirmation to strong negation according to the importance based on their own opinions. The statements(Q1) about multiple children were classified on the basis of 12-point scale. After that, in relation to the statements classified into both extremes, the further interview with the relevant subject was performed. For the Q-factor analysis, the Principal Component Factor Analysis(varimax) was used. The classification of types was selected by considering the total variance explained and the calculated results by variously inputting the number of factors on the basis of Eigen value as 1.0 or up. For the collected data, the converted score given with 1-12 points was scored focusing on the forcedly-distributed cards in the Q-sample distribution chart. By coding the given converged score in the order of Q-sample No., it was processed with the principal component factor analysis by the QUANL PC Program. The QUANL pc program was used for data analysis[13-15].

2.5. Ethical Consideration for Research Subjects

After asking the subjects for voluntary consent before starting the research, they were explained that they could stop participating anytime during the process of research. In order to respect the subjects' rights, and also to guarantee their privacy and confidentiality, all the data collected by this study was anonymously processed and coded in the whole data analysis processes, which was to protect the confidentiality through Q-sorting.

To ensure the autonomy of participants, the purpose of the research, the method of research, and the recording of the interview contents were explained first before the meeting. Then, the ethical aspects of the box were considered by obtaining verbal consent, receiving consent, and making compensation commensurate with participation in the research. As a measure not to violate the privacy of participants according to the principle of bad behavior, It was informed that the interview would be used only for research purposes, and personal situations were kept secret while ensuring anonymity. Also, It was informed that the research results would be published and the participants could stop participating in the research anytime they want. In order to avoid revealing the identity of research participant, the computer file was assigned a unique password for the researcher and all information that could identify the participant was deleted.

3. Results

3.1 Structure of Q Type

In the results of conducting the Q-factor analysis on the nursing students' subjectivity on medical disputes by using the QUANL pc program, there were three types.

Participants in this research conveniently were extracted from 20 nursing college students who were found to have experienced more than one clinical practice in the fourth grades of the nursing department in University. The general characteristics of the research subjects are as shown in [Table 2]. The total number of people surveyed total 20 with the average age being 21.90 ± 2.02 . Among them, 90 percent did not have a religion and 10 percent had a religion.

Table II . General Characteristics

| Type | No | Age | Gender | Religion | FWS* |
|--------|----|-----|--------|-----------|--------|
| Type 1 | 5 | 25 | M | Christian | .8365 |
| | 7 | 22 | M | No | .4433 |
| | 8 | 20 | F | No | .9548 |
| | 11 | 20 | F | No | 1.3740 |
| | 19 | 22 | M | No | .5151 |
| Type 2 | 4 | 22 | F | No | .3497 |
| | 9 | 20 | F | No | .2976 |
| | 10 | 20 | F | No | .6072 |
| | 14 | 22 | F | No | 2.7254 |
| | 15 | 20 | F | No | .2997 |
| | 17 | 20 | F | No | .8938 |
| Type 3 | 1 | 24 | F | No | .4256 |
| | 2 | 23 | F | No | .2615 |
| | 3 | 23 | F | Buddhism | .4006 |
| | 6 | 28 | F | No | .2217 |
| | 12 | 21 | F | No | .1855 |

| | | | | | |
|--|----|----|---|----|--------|
| | 13 | 21 | F | No | .4418 |
| | 16 | 22 | F | No | .2342 |
| | 18 | 21 | F | No | .5487 |
| | 20 | 22 | F | No | 1.1560 |

*FWS: factor weight score

3.2 Type Specific Characteristics in Medical Disputes

To analyze the nursing students' subjectivity of multiple children in each type, first, the characteristics of each type were described focusing on the statements belonging to each type. Regarding the Q-response of P-sample(research subjects), total three factors were extracted by dividing them into upper-item and sub-item. In the Q-methodology, among the people belonging to each type, the person with higher factor weight is the typical or ideal person representing the type.

In order to analyze the characteristics of each type of multiple children, among the items of classified statements, the statements with standard score(z-score) as ± 1.00 or up were interpreted by placing weight on them. In this study, the people with factor weight as 1.0 or up belonged to each type such as five people in Type1, six people in Type2, and nine people in Type3.

In the results of analyzing the subjectivity of multiple children by using the PC QUANL program, there were total three factors, which explained 46.14% of total variables, such as 28.95% for Factor1, 8.76% for Factor2, and 8.42% for Factor3. As Factor1 shows the 28.95% explanatory power, it could be viewed as a factor that explains the most perception of multiple children[Table 3]. Of the whole 14 research subjects, there were five people belonging to Factor1, six people belonging to Factor2, and nine people belonging to Factor3. Those people belonging to each factor mean the group showing similar responses to multiple children.

Table III. Eigen Value, Variance, and Cumulative Percentage

| Hospitals | Type I | Type II | Type III |
|-----------------|--------|---------|----------|
| Eigen Value | 5.7909 | 1.7521 | 1.6850 |
| Variance(%) | .2895 | .0876 | .0842 |
| Cumulative(%) | .2895 | .3772 | .4614 |

The correlation coefficients between the three factors are shown in [Table 4]. This shows the degree of similarity among the three types. The correlation coefficient between type 1 and type 2 is

0.4158. type 1 and type 3 is 0.5943, and 0.7426 in type 2 and type 3. Type 1 and type 2 had a relatively high correlation with other types. However, the correlation between factors in the Q method is different from the factor analysis method in the quantitative research, and since it focuses on finding the factors without presupposing the complete independence between the factors, there is no controversy over the method of factor extraction based on the high and low correlation.

Table IV. Correlations Between Factor Scores

| Hospitals | Type I | Type II | Type III |
|-----------|--------|---------|----------|
| Type I | 1.000 | .4158 | .5943 |
| Type II | - | 1.000 | .7426 |
| Type III | - | - | 1.000 |

3.3 Analysis by Type

The types of subjectivity of multiple children calculated by this type analysis method could be presented as follows.

Type of Perceiving Difficulties in Rearing Multiple Children: Total five subjects belonged to Type1. The subjects of Type1 showed strong affirmation in statements like 'Due to the difficulties in rearing multiple children, the economic burden is huge.(Z=2.09)', 'If the family is not financially affordable, it is hard to satisfy what the children want.(Z=2.01)', and 'The multi-child families have hardship by private education expenses.(Z=1.31)'[Table 5]. In Type1, the subject with the highest factor weight was No.11(1.3740), and the most affirmed statements were No.1 and No.11. The subjects of Type1 showed strong negation in statements like 'The parents of multiple children have increased conversation hours between husband and wife.(Z=-2.39)', 'Due to the increased age of mother by multiple children, it is possible to give birth to a child with disabilities.(Z=-2.20)', and 'There are many cases of giving birth to multiple children by family's pressure.(Z=-1.78)'[Table 5]. In Type1, the subject with the lowest factor weight was No.7(0.4433), and the most negated statements were No.35 and No.5.

In the characteristics of Type1, they thought that people would be reluctant to give birth multiple children as it would be tough to rear multiple children in modern society. The biggest reason would be economic burden in the process of rearing. Also, in case of rearing multiple children, it would be difficult to secure personal time for parents, they thought. However, they did not agree to the increase of conversation hours between husband and wife with multiple children, and many cases of giving birth to multiple children by family's pressure. They thought that the financial support through policies and childcare system should be secured for increasing the birth rate as the birth and rearing of multiple children are accompanied by corresponsive cost burden. Thus, Type1 was named 'Type of perceiving difficulties in rearing multiple children'.

Type of Emphasizing Strengths of Rearing Multiple Children: Total six subjects belonged to

Type2. The subjects of Type2 showed strong affirmation in statements like 'The siblings in the old age could become important support system to each other.($Z=1.91$)', 'The quality of interactions between members of multi-child families contributes to individuals' psychological well-being.($Z=1.79$)', and 'The first child could become a cooperator of child-rearing.($Z=1.67$)'[Table 5]. In Type2, the subject with the highest factor weight was No.14(2.7254), and the most affirmed statements were No.28 and No.41. The subjects of Type2 showed strong negation in statements like 'The parents from multi-child families cannot avoid career interruption.($Z=-1.74$)', 'In multi-child families, the father's role is increasing.($Z=-1.64$)', and 'There are many cases of giving birth to multiple children by family's pressure.($Z=-1.56$)'[Table 5]. In Type2, the subject with the lowest factor weight was No.9(0.2976), and the most negated statements were No.26 and No.17.

In the characteristics of Type2, they thought that the birth/rearing of multiple children should be promoted by perceiving and emphasizing its strengths more than weaknesses. They preferentially thought the importance of support system by siblings, and positive effects of family interactions on the psychological stability. However, they also thought that the financial affordability should be considered for birth of multiple children as the financial issue could not be disregarded for rearing multiple children. However, they did not agree to the career interruption of parents from multi-child families, and increase of parents' role burden because of the current childbirth policies. They also thought that the decision on multiple children should be made by husband and wife. Thus, Type2 was named 'Type of emphasizing strengths of rearing multiple children'.

Type of Focusing on Children of Multi-Child Families: Total nine subjects belonged to Type3. The subjects of Type3 showed strong affirmation in statements like 'If the family is not financially affordable, it is hard to satisfy what the children want.($Z=2.19$)', 'The children from multi-child families could become friends to each other, which is a strength of multiple children.($Z=1.92$)', and 'It is hard to establish a personal space in multi-child families.($Z=1.53$)'[Table 5]. In Type3, the subject with the highest factor weight was No.20(1.1560), and the most affirmed statements were No.11 and No.6. The subjects of Type3 showed strong negation in statements like 'The mother from multi-child families regards her children as everything she has.($Z=-2.25$)', 'There are many cases of giving birth to multiple children by family's pressure.($Z=-1.75$)', and 'Each child has difficulties in forming complete attachment.($Z=-1.39$)'[Table 5]. In Type3, the subject with the lowest factor weight was No.12(0.1855), and the most negated statements were No.32 and No.2.

In Type3, they viewed multi-child families in the position of children from multi-child families. They thought it would be difficult to get everything desired as everything should be shared with other siblings in case when having many siblings. However, they thought that the siblings who spent lots of time together in the same environment could become the support system to each other in adulthood after the growth period passed. However, they did not agree to the fact that the parents from multi-child families should devote themselves to their children, or multiple children are born by family's pressure. Thus, Type3 was named 'Type of focusing on children of multi-child families'.

**Table V . Representative items on the multi-children and Z-score
(N=20)**

| Representative items of type | | | | | |
|------------------------------|----------|----|---|--------------|---------|
| Factor | Type | No | Representative items | Mean(SD) | Z-score |
| Type1 (N=5) | Factor 1 | 1 | Due to the difficulties in rearing multiple children, the economic burden is huge. | 10.20(2.490) | 2.09 |
| | | 11 | If the family is not financially affordable, it is hard to satisfy what the children want. | 9.80(3.271) | 2.01 |
| | | 15 | The multi-child families have hardship by private education expenses. | 9.00(1.732) | 1.31 |
| | | 21 | The parents of multiple children are lacking in time for self-development. | 8.80(1.095) | 1.31 |
| | | 22 | Due to negative images of multiple children like cost burden, the multi-child families are decreased. | 7.80(3.421) | 1.26 |
| | | 35 | The parents of multiple children have increased conversation hours between husband and wife. | 2.00(0.707) | -2.39 |
| | | 5 | Due to the increased age of mother by multiple children, it is possible to give birth to a child with disabilities. | 2.00(1.000) | -2.20 |
| | | 2 | There are many cases of giving birth to multiple children by family's pressure. | 2.80(.1643) | -1.78 |
| | | 24 | The multi-child families have increased hours of spending time together with family members. | 4.00(1.581) | -1.47 |
| | | 23 | There are many cases in which the role burden is weighted to one side in multi-child families. | 3.80(0.447) | -1.44 |

| | | | | | |
|-----------------|----------|----|---|--------------|-------|
| Type 2 (N=6) | | 28 | The siblings in the old age could become important support system to each other. | 8.83(1.941) | 1.91 |
| | Factor 3 | 41 | The quality of interactions between members of multi-child families contributes to individuals' psychological well-being. | 9.67(1.366) | 1.79 |
| | | 38 | The first child could become a cooperator of child-rearing. | 9.00(2.449) | 1.67 |
| | | 11 | If the family is not financially affordable, it is hard to satisfy what the children want. | 9.50(1.871) | 1.59 |
| | | 1 | Due to the difficulties in rearing multiple children, the economic burden is huge. | 10.17(2.317) | 1.47 |
| | | | | | |
| | Factor 4 | 26 | The parents from multi-child families cannot avoid career interruption. | 4.67(2.251) | -1.74 |
| | | 17 | In multi-child families, the father's role is increasing. | 4.33(2.251) | -1.64 |
| | | 2 | There are many cases of giving birth to multiple children by family's pressure. | 2.00(1.549) | -1.56 |
| | | 14 | The multi-children support policies provided by the state are not effective. | 4.17(1.722) | -1.49 |
| | | 13 | It is hard for the children from multi-child families to form their identity. | 4.00(1.414) | -1.44 |
| Type 3 (N=9) | | 11 | If the family is not financially affordable, it is hard to satisfy what the children want. | 10.00(2.179) | 2.19 |
| | Factor 5 | 6 | The children from multi-child families could become friends to each other, which is a strength of multiple children. | 9.56(1.333) | 1.92 |
| | | 12 | It is hard to establish a personal space in multi-child families. | 8.44(2.242) | 1.53 |

| | | | | | |
|--|----------|----|--|-------------|-------|
| | | 21 | The parents of multiple children are lacking in time for self-development. | 8.00(2.598) | 1.50 |
| | | 28 | The siblings in the old age could become important support system to each other. | 9.00(1.871) | 1.25 |
| | Factor 6 | 32 | The mother from multi-child families regards her children as everything she has. | 2.78(1.394) | -2.25 |
| | | 2 | There are many cases of giving birth to multiple children by family's pressure. | 3.89(3.180) | -1.75 |
| | | 10 | Each child has difficulties in forming complete attachment. | 5.44(2.877) | -1.39 |
| | | 38 | The first child could become a cooperator of child-rearing. | 4.00(1.803) | -1.36 |
| | | 3 | Due to the sexual preference, multiple children are born. | 5.11(2.804) | -1.26 |
| | | | | | |

4. Discussion

In the results of this study, the types of subjectivity of multiple children perceived by nursing students included Type1-'type of perceiving difficulties in rearing multiple children', Type2-'type of emphasizing strengths of rearing multiple children', and Type3-'type of focusing on children of multi-child families', and this study aims to discuss the characteristics of each type as follows.

Type1 shown in this study was the 'type of perceiving difficulties in rearing multiple children'. The birth and rearing of multiple children have difficulties in many areas. Among them, they preferentially thought of economic burden. Because of the great cost burden in the process of rearing children, our society is gradually reluctant to give birth to children.

Most of the researches that empirically analyzed the economic factors of low birth used the national longitudinal data. The research by Y. Oh & S. Park(2008) viewing the choice of married women as an important cause for childbirth, reported that the improved condition for women's economic activity and unstable employment condition for young adults would have significant effects on the low birth[16]. Meanwhile, under the assumption that the rise of age at first marriage is directly connected to low birth, C. Oh & S. Choi(2012) especially emphasized the influences of employment instability for men, rise of housing cost, and increase of unemployment[17]. Even though the researches revealing the economic factors of low birth could prospect the trend of social changes in the macroscopic context by using data secured with representativeness, they are limited to have in-depth discussions of individuals' internal factors as they approach the causes for low birth in the perspective of economic determinism.

However, the research by I. Berninger, B. Weiß & M. Wagner(2011) shows that when the economic factors are complexly working with the qualitative aspect of relation, it could be led to the childbirth will[18]. Concretely, in case of men, the income had direct effects on the intention to have a child, which was different from women. Also, the satisfaction with income and employment security had effects on the marital conflicts, which could be led to childbirth will as mediating effects.

In preceding researches, the unmarried men/women or married couples with no or single child pointed out 'economic burden' the most as the reason why they were reluctant to give birth to children, or difficulties in child-rearing. However, this might be based on vague expectation of life with multiple children, and negative information about education/childcare cost heard from the mass media. In order to help the future parents to make more effective and proper decision-making, it would be necessary to show not only the tough reality of rearing children, but also the actual look of married couples who are currently rearing many children.

Type2 was the 'type of emphasizing strengths of rearing multiple children'. As multi-child families could have many strengths of rearing multiple children, they aimed to solve the low birth problem by promoting and informing those strengths. In multi-child families, the children depend on each other and also naturally learn the virtues of life such as cooperation and conservation. Of course, in spite of huge economic burden, they thought the strengths of multi-child families would be greater than that.

Many researches reported that the parents with multiple children were satisfied with rearing three children or more by cognizing relatively huge and many strengths compared to physical and economic difficulties[19-21]. The parents with multiple children responded that they felt great about having three children or more when those children got along with each other just like friends. And to the question about the moment when they felt regret for having many children, about 40% of them said that they never regret even when it was physically and financially tough to rear children[19]. As the biggest strength of child-rearing experiences of parents with multiple children, the personal/humane growth is representatively reported such as more relaxed and comfortable attitude towards child-rearing, and more tolerant child-rearing attitude by admitting the diversity of children[19-22]. It was also commonly reported that the children were equipped with sociality to consider others and to get along with peers[20-22]. Based on the parents' increased responsibility for their family, the emotional/physical closeness and bond between husband and wife are increased, and the family gets more harmonious, which is one of the strengths of multi-child families[21].

In this type, the enhanced sociality of children or emotional happiness was mentioned as the strengths of rearing multiple children, and the economic/physical burden was reported as its difficulties, which accords with the results of previous researches on parent role or parents with high birthrate[20, 21]. This was also similar to the results of preceding researches reporting that the parents with high birthrate were perceiving the relatively great strengths of rearing multiple children[19, 22]. This shows the necessity to change the social atmosphere in which many married couples feel difficult and burden of child-rearing before childbirth or even before marriage, and also to establish the social atmosphere to plant the expectation and positive perception of childbirth. Actually, there was a previous research

reporting the necessity to form the social atmosphere to regard marriage and childbirth as happiness and blessing to overcome the low birth, which is supporting the results of this study[19].

Type3 was the 'type of focusing on children of multi-child families'. They thought and assumed everything in the position of children among the members of multi-child families. They thought that the children from multi-child families could not get financially-enough support in the limited family resources, and also have limitations like personal space. However, they thought that they would have high emotional support or bond while the parents would unavoidably have burden for child-rearing.

The sibship is an important family relationship. There is a hypothesis in which the children fill their socio-emotional/intellectual desires that were not met by parents, or the positive parent-child relation is led to positive sibship[23]. As a family relationship that lasts for a lifetime, the sibship is a place for practicing and testing the original form of every interpersonal relationship we could experience. Once the attachment between siblings is formed, it provides the emotional stability and affinity; an elder sibling could develop social skills like leadership by interacting with younger siblings; and the younger siblings have an advantage to acquire cognitive abilities. In the results of a research by Im Chun-Hee(2011), the pressure felt by parents could be reduced as the first or second child shares the role of child-rearing, or they naturally depend on their older child behaving like a grown-up[21].

As the family relationship that lasts for the longest time in our lives, the sibship in family could become a place for practicing and testing the original form of every interpersonal relationship we could experience. In the perspective of children, the multi-child family is a great chance to experience dynamic interpersonal relationships. According to a preceding research related to siblings, when the number of siblings was more, the self-concept and sociality were high[24]. Also, when the number of siblings was more, the children showed higher social abilities[25]. And according to Park Yeong-Ae & Jeong Ok-Bun(1996), the warmth and affinity felt from sibship were positively working on children's self-esteem while the conflicts between siblings were negatively working[26].

This study explored the nursing students' subjective perception of multiple children, and then analyzed the perception by dividing it into three types. This study showed the necessity of changes in social perception and institutional support for multiple children. Also, in case of nurses who will be married and give birth in the future, the promotion and support of multiple children would bring about effects in the aspect of encouraging child-birth. In the characteristics of each type, it was divided into the 'type of perceiving difficulties in rearing multiple children' that could explain the causes for low birth in modern times, the 'type of emphasizing strengths of rearing multiple children' aiming to emphasize/promote the strengths in birth and rearing of multiple children', and the 'type of focusing on children of multi-child families' considering the family role and strengths/weaknesses felt by children from multi-child families.

The research on the subjectivity could be helpful for changing the perception of multiple children in our society, by considering the roles of nurses as a woman and educator. Moreover, by presenting the subjective structure and characteristics of perception of multiple children in each type

targeting nursing students as preservice healthcare providers, this study could be utilized as the basic data for the development of differentiated educational programs.

However, this study targeted a single university and also selected its subjects without considering the factors having effects on the perception of multiple children, so it would be limited to generalize the results of this study. Thus, the further researches need to conduct the additional verification of types by composing Q-sample with diverse backgrounds[27].

5. Conclusion

Because humans are unique and human beings, individual and integrated research of subjectivity is inevitable to understand the perception of medical decisions. This research, using Q methodology, seeks to present basic data to enhance the ability to perform a role as a nurse in clinical sites by identifying the subjective perception types of nursing students in multi-children families.

This study aimed to provide the basic data necessary for presenting the approach direction for nurses and changes in the perception of multiple children through subjective data by exploring the nursing students' subjective perception of multiple children, by applying the Q-methodology. In the results of this study, the types of multiple children perceived by nursing students were divided into three factors such as the 'type of perceiving difficulties in rearing multiple children', 'type of emphasizing strengths of rearing multiple children', and the 'type of focusing on children of multi-child families'.

This study provided the basic data for establishing the measures for improving the attitude and perception of multi-child families, by categorizing the nursing students' subjectivity of multiple children. This study analyzed the types of multiple children perceived by nursing students, and then verified the characteristics, so it is expected to see the development of educational programs considering the characteristics of each type. This study also suggests an additional research on the analysis of types by selecting the sample considering various factors, and also a qualitative research for verifying various factors having effects on nursing of patients from multi-child families.

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