A STUDY ON SUBJECTIVITY ON INDUCED ABORTION AMONG NURSING STUDENTS

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Abstract— **(1) Background: The purposes of this study are to identify subjectivity of induced abortion perceived by nursing school students, describe characteristics of different factors of subjectivity, using Q methodology. (2) Methods: This study chose 20 junior and senior students who finished practical training in nursing department of a college and asked them to sort 38 statements on induced abortion. Collected data were analyzed using QUANL PC Program. (3) Results: The analysis found out that perceptions of respondents can be divided into three factors: 'negative perception type', 'result perception factor', and 'cause-finding factor'. (4) Conclusions: This study will serve as the basic data to figure out perceptions of nursing students on induced abortion and to educate those students.**

Keywords— **Induced Abortion, Nursing Students, Subjectivity, Q Methodology**

1. INTRODUCTION

1.1. NECESSITY OF STUDY

Induced abortion often involves many problems in the aspects of demography, society, public health, and ethics. In the early 1800s, England first regulated surgery on induced abortion[3], making it to be performed secretly. Such illegal treatment on abortion caused 18% of maternal mortality in America in the 1930s and 25% of it in America in 1965[1].

If someone underwent induced abortion treatment because of unwanted pregnancy, and has suffered from complications and after-effects, and if she does not have proper prenatal care after pregnancy, it can seriously threaten health of pregnant woman and unborn child[2]. In particular, induced abortion can damage her mental, and socio-cultural health as well as physical health[3]. There are women who are hospitalized or get outpatient treatment because of induced abortion and damages caused by it.

Nurses are core manpower who not only take the largest part in public health and medical care places, but contact patients most often. Thus, they need to provide patients with safe and high-level nursing within limited time in rapidly changing public health and medical care environment[4]. subjective perception of nurses when they face patients greatly influence their nursing of patient. Therefore, it is important to examine perception of nurses and nurse candidates.

There are not enough studies on induced abortion using students of nursing department as research targets. Q methodology analyzes subjectivity structure of interviewees, and allows us to understand characteristics of different factors of subjectivity[5]. As perceptions of nursing students on induced abortion are subjective experiences, Q methodology is proper to identify factors of perceptions of nursing students on it.

Accordingly, this study intends to provide basic data necessary to develop programs on education on induced abortion to nurse candidates before they start their works in hospitals, by examining subjectivity structure of nursing students on induced abortion.

1.2. PURPOSE OF STUDY

The purposes of this study are to examine factors of subjective perceptions and characteristics of those perceptions of nursing students on induced abortion by applying Q methodology, to provide information on nursing students who will care patients of induced abortion, and provide basic data on education program for nursing students. Specific research purposes are as follows.

1) Categorize subjective perceptions of nursing students on induced abortion.

2) Analyze and describe the characteristics of different factors of perceptions on induced abortion of them.

2. MATERIALS AND METHODS

2.1. DESIGN OF STUDY

To achieve research purposes, this study examined the literature on induced abortion and related materials, and did survey to nursing students to find out factors of subjective perceptions on induced abortion among nursing students.

2.2. Q POPULATION AND Q SAMPLE SELECTION

To get comprehensive statements on the effects of induced abortion, this study extracted Q population of more than 200 statements in three areas from reviews of domestic and foreign literature on abortion, open-ended questionnaire, and in-depth interview of individuals. In addition, this study extracted Q population of more than 100 statements through reviews of domestic and foreign literature. By reviewing and revising the Q sample extracted from such a process, this study selected the 38 distinct statements.

2.3. METHOD OF SELECTING P-SAMPLE

Q method is qualitative survey method focusing on subjectivity within individual, and emphasizing consistency of individual, rather than differences between people. It is based on small sample doctrine which assumes that if p-sample becomes large, many people can crowd around a specific component, and its characteristics are not clearly revealed [6]. P-sample in this study is 20 nursing school students who fully understood the purposes of the survey and voluntarily participated in the survey.

2.4. Q SORTING AND METHOD OF DATA ANALYSIS

Q sorting is the process where each of participants belonging to p-sample makes voluntary definition of induced abortion by sorting statements in Q-sample with forced normal distribution method[6]. The data were collected from 20 students in Nursing Department of OO College with cards containing statements. The time spent by one participant in Q sorting was 30-45 minutes on average. Participant responded to each statement of Q sample by opinions his or her preference on the 12 point scale ranging from strong negative to strong positive. Afterwards, on statements participants chose extremely positive or negative points, they were interviewed again. The data were under principle component factor analysis (varimax). Categorization into factors was done by considering the output from inputting factors with eigen value 1.0 or over and total explained variate. Collected data were coded with converted points from 1 to 12 in the forced distributed

cards. By coding converted points in the order of Q sample number, and put under principle component factor analysis using the QUANL PC Program[7, 8].

2.5. ETHICAL CONSIDERATION OF RESEARCH PARTICIPANTS

Research participants voluntarily cooperated with the survey, and were informed that they could terminate the interview any time they wanted. To respect their rights and to protect their privacy and personal information, all the information collected was anonymously coded and Q sorted.

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. Q FACTOR STRUCTURE

Q-factor analysis of subjectivities on induced abortion of nursing students by QUANL pc program revealed 3 factors.

To analyze subjectivities on induced abortion among nursing students, this research described characteristics of each factor focusing on statements belonging to the factor. Q responses of P sample (participants) were divided into upper questions and lower questions, and 3 factors were extracted. In Q method, someone who has high factor weight is considered as typical or ideal person.

To analyze characteristics of each factor, this research gave meanings to statements whose z-scores are ±1.00 or over and explained them among all the classified statements. The number of participants whose factor weights are 1.0 or over and who belonged to factor 1 was 7, and 5 in factor 2, and 8 in factor 3.

The analysis of subjectivities on induced abortion of participants using QUANL pc program revealed 3 factors, which explained 46.09% of total variance. factor 1 explained 30.24% of total variance; factor 2 did 8.48%; factor 3 did 7.36%. As the explanatory power of factor 1 is 30.24%, the factor can be said to be able to explain subjectivity on induced abortion the best. Participants belonging to a specific factor responded similarly to the statement on induced abortion.

3.2. CHARACTERISTICS OF EACH SUBJECTIVITY FACTOR ON INDUCED ABORTION

3.2.1. NEGATIVE PERCEPTION FACTOR

7 participants belonged to factor 1. The statement to which those belonging to factor 1 expressed strong positive attitude were 'Abortion can cause complications like excessive bleeding, infection and others' (Z=2.10); 'Abortion can make the pregnant woman vulnerable to pre-term birth, low birth weight and others' (Z=1.67); 'Negative perception on abortion can reduce abortion rate' (Z=1.43) [Table I]. The participant whose factor weight

was the highest (1.6278) in factor 1 was participant No. 1, and the statements to which the participant agreed the most were No. 9 and No. 10. The statements to which participants of factor 1 expressed the most negative responses were 'Abortion is the best choice to regulate childbirth' (Z=-2.37); 'Boy preference increases abortions' (Z=-1.74); 'Unreligious woman is more likely to have abortion' (Z=-1.61) [Table I]. The participant in factor 1 whose factor weight was the lowest (0.4319) was participant No. 20. The statements to which the participant agreed the most were No. 11 and No. 4.

The characteristics of factor 1 lies in worries about various complications and side-effects caused by abortion. Given that as the reason for abortion lies in unwanted pregnancy of unmarried women or minors, if the society emphasizes negative aspects of abortion, those women will less likely to have abortion. They also viewed that, because of the law which allows induced abortion for woman within 24 weeks of pregnancy, it is expected that the number of induced abortions will increase. They wanted more detailed explanation on side effects or complications of abortion would be given to pregnant women. Accordingly, this research named the factor as 'the negative perception factor'.

3.2.2. RESULT PERCEPTION FACTOR

5 participants belonged to factor 2. The statements to which those belonging to factor 2 expressed strong positive attitude were 'Increasing abortion can lower birth rate' (Z=2.02); 'Abortion can cause complications like excessive bleeding, infection and others' (Z=1.57); 'Abortion can make the pregnant woman vulnerable to pre-term birth, low birth weight and others' (Z=1.57) [Table I]. The participant whose factor weight was the highest (0.9567) in factor 2 was participant No. 2, and the statements to which the participant agreed the most were No. 1 and No. 9. The statements to which participants of factor 2 expressed the most negative responses were 'The lower education level of pregnant woman, the higher she is likely to choose abortion.' (Z=-2.02); Proper ethics on abortion can prevent abortion' (Z=-1.57); 'Pregnant woman who is educated about morals on abortion is less likely to have abortion' (Z=-1.57) [Table I]. The participant in factor 2 whose factor weight was the lowest (0.2919) was participant No. 18. The statements to which the participant agreed the most were No. 13 and No. 34.

The characteristics of factor 2 lies in interest in results derived from increase of induced abortion. It considers social effects of abortion in addition to worries about complications and about danger to new born babies of factor 1. factor 2 is concerned about the situation where rapid industrialization and increase of unmarried young people increase induced abortion, further reducing childbirth. factor 2 assumes that, as social changes lead to increasing abortion, it will be difficult to reduce abortion even if young people are educated on ethics regarding abortion, complications and side effects of it. It also assumes that even if social perception on unmarried mother is changed, it will not reduce proportion of abortions. Accordingly, this research named factor 2 as 'result perception factor'.

3.2.3. CAUSE-FINDING FACTOR: 8 participants belonged to factor 3. The statements to which those belonging to factor 3 expressed strong positive attitude were 'Abortion can cause complications like excessive bleeding, infection and others' (Z=1.79); 'Premarital pregnant woman is more likely to have abortion' (Z=1.78); 'Failure to have contraception can increase frequency of abortion' (Z=1.56) (Table 1). The participant whose factor weight was the highest (0.9565) in factor 3 was participant No. 12, and the statements to which the participant agreed the most were No. 9 and No. 17. The statements to which participants of factor 3 expressed the most negative responses were 'In the aspect of reproductive health, abortion is harmful' (Z=-1.70); 'If society gets more open, abortion will decrease' (Z=-1.65); 'If fetus sex is female, pregnant woman is more likely to have abortion' (Z=-1.64). The participant in factor 2 whose factor weight was the lowest (0.2867) was participant No. 8. The statements to which the participant agreed the most were No. 6 and No. 36.

Factor 3 is interested in the cause of induced abortion. It assumes that premarital conception, failure to have contraception, and unstable relationship with partner are the causes of abortion. As abortion is chosen to regulate childbirth, we cannot be only concerned about side effects of it, according to factor 3. It views that choice of pregnant woman is more important than any other situation. So, this study calls factor 3 as 'cause-finding factor'.

Table I. Q-statements on Induced Abortion per Factor and Z-scores (N=20)

Factor	No	Description	Mean (SD)	Z-score
Factor 1 (N=7)	9	Abortion can cause complications like excessive bleeding, infection and others.	9.14(0.900)	2.10
	10	Abortion can make the pregnant woman vulnerable to pre-term birth, low birth weight and others.	8.29(0.756)	1.62
	30	Negative perception on abortion can reduce abortion rate.	7.43(1.618)	1.43
	2	Unmarried pregnant woman is more likely to have abortion.	7.86(1.952)	1.39
	25	Minors are more likely to have abortion than adult women.	7.43(1.134)	1.31
	11	Abortion is the best choice to regulate childbirth.	1.43(0.535)	-2.37
	4	Boy preference increases abortions.	3.29(1.890)	-1.74
	5	Unreligious woman is more likely to have abortion.	2.71(1.380)	-1.61
	15	Easier access to free abortion will decrease abortion cases.	2.43(0.787)	-1.59
	21	Countries not developed in medical insurance have lower rates of abortion than those with advanced medical insurance.	3.43(1.512)	-1.10
Factor 2 (N=5)	1	Increasing abortion can lower birth rate.	6.60(3.286)	2.02
	9	Abortion can cause complications like excessive bleeding, infection and others.	6.20(2.588)	1.57
	10	Abortion can make the pregnant woman vulnerable to pre-term birth, low birth weight and others.	6.40(3.578)	1.57
	37	Rapid industrialization increases abortion rates.	6.00(2.449)	1.57
	2	Minors are more likely to have abortion than adult women.	7.80(2.168)	1.12
	13	The lower education level of pregnant woman, the higher she is likely to choose abortion.	4.80(2.168)	-2.02
	34	Proper ethics on abortion can prevent abortion.	4.40(1.817)	-1.57
	31	Pregnant woman who is educated about morals on abortion is less likely to have abortion.	2.20(1.095)	-1.57
	32	Changes of social perception on unwed mother will decrease abortion.	4.80(3.421)	-1.57
	21	Counties with good medical insurance have lower abortion rates.	3.60(0.894)	-1.12
Factor 3 (N=8)	9	Abortion can cause complications like excessive bleeding, infection and others.	6.75(2.121)	1.79
	17	Premarital pregnant woman is more likely to have abortion.	8.38(1.408)	1.78
	3	Failure to have contraception can increase frequency of abortion.	6.50(2.070)	1.56
	18	Unstable relations with partners make women to choose abortion.	8.50(0.535)	1.48
	11	Abortion is the best choice to regulate childbirth.	5.63(1.923)	1.15
	6	In the aspect of reproductive health, abortion is harmful.	3.50(1.927)	-1.70
	36	If society gets more open, abortion will decrease.	4.25(2.121)	-1.65
	29	If fetus sex is female, pregnant woman is more likely to have abortion.	2.75(1.832)	-1.64
	23	The decision to have abortion is affected by opinions of those near pregnant woman.	3.63(2.387)	-1.42
	37	Rapid industrialization increases abortion rates.	5.13(1.885)	-1.28

4. DISCUSSION

This research identified 3 factors, and named their characteristics as 'negative perception factor', 'result perception factor', and 'cause-finding factor'. The characteristics of each factor are as follows.

In this research, factor 1 is 'negative perception factor'. It assumes that as abortion can generate various complications and side-effects, abortion should avoided. As the4 best choice of unwanted conception is not abortion, the society needs to reduce induced abortion through education of young people. In addition, if sexual culture and perception on induced abortion are changed, induced abortion will decrease, it assumes.

The second factor is 'result perception factor'. This factor is concerned about social influence, and influence to family members and others around women having induced abortion beyond concerns about side-effects and complications of abortion, It views that demographic changes will bring about increase of induced abortion, and that aging of population, low birthrate, and change of family factors will change negative perceptions on induced abortion. It also assumes that while sex education and change of perception on induced abortion can reduce cases of abortion, but social changes will inevitably increase induced abortion.

The third factor is 'cause-finding factor'. It focuses on the cause for choosing to have abortion. Most women in unwanted pregnancy choose induced abortion, and the reasons for deciding to have abortion vary. The factor views that to reduce the number of induced abortion and to increase birth rate, we need to pay attention to the reasons why they choose abortion.

This study, differentiated subjective perceptions on induced abortion among nursing students into 3 factors. It was found that most of respondents are worried about complications and side-effects of induced abortion more than whether they agree on or oppose to it. The three factors are as follows: the factor that views it negatively because of the problems it can cause; result recognition factor that focuses on socio-cultural effect of it; cause-finding factor that focuses on causes for induced abortion and thinks of ways to reduce it.

Such a research on subjectivity can be used as basic sources in preparing for countermeasures to deal with rapid increase of induced abortion after it became legal. Plus, this research expects that the findings of the subjectivity structure and characteristics of the different factors on induced abortion among nursing students can be used for basic data to develop educational programs on it.

But, in the sense that this study used only students from only one school and did not select respondents considering the factors affecting perceptions on induced abortion, it has limits in generalizing the findings. In the future, it is necessary to do additional researches using Q sample with various backgrounds.

5. CONCLUSIONS

This study was performed to make basic data to counter the rapid increase of induced abortions after legalization of induced abortion through the analysis of subjective perceptions of nursing students, using Q methodology. The analysis resulted in 3 factors of perceiving induced abortion among students: negative perception factor, result perception factor, and cause-finding factor.

The analysis of this research will serve as basic data to adopt and apply the policy to prevent indiscreet induced abortions in the future. Identification of factors of perceiving induced abortion among nursing school students is expected to serve as sources for developing educational programs.

And, this research suggests that there should be further qualitative studies identifying various elements affecting care of nurses on women under induced abortions by choosing samples considering various elements.

ACKNOWLEDGMENT

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