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Evaluation of Reproductive Health Education for Young Couples

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Abstract Eighty-six young people, who were church-going newly married or engaged couples and their friends, viewed a video concerning childbirth, and presented their opinions about life, sex, and family planning. Then, they were shown a video concerning the Billings method, lectured on planned pregnancy, and answered a free-writing questionnaire about planned pregnancy and partnership.

The contents of education and answers to the questionnaire were analyzed. Three concepts, i.e. "affection", "impression", and "coordination", were selected by the linguistic interactive categorical analysis, and whether "affection" and "impression" have led to "coordination" between the partners in the form of planned birth or not was evaluated. The subjects who wrote much about affection also wrote significantly more about impression. Although no significant correlation was observed between affection and coordination in major categories, significant correlations were observed between "protect" and "agreement in thought" and between "important" and "agreement in rhythm". In the category of "coordination", "agreement in thought" (81.4%) and "agreement in rhythm" (94.2%) were mentioned by many subjects, but "self-regulated" was mentioned by only 8.1%.

Therefore, cooperation and agreement between the partners with love and responsibility were considered to be important for success in planned pregnancy.

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Key Words : Family planning, educational assessment, reproductive health rights, Billings method, linguistic interactive category analysis

Introduction

Sexual behavior, state of marriage, and circumstances of birth are changing greatly, and appropriate education on family planning, sexual behavior, and love of married couples matched for these changes are needed for promoting reproductive health and rights, which are the key concept of maternal and child health care and nursing.

As the percentage of unmarried women with sexual experience has exceeded 50%, and as sexual activities of women aged 16-19 years have markedly increased compared with women in other age categories, propagation of correct knowledge about contraception is necessary. Among married couples, contraceptive measures are taken by 70-80%, but "estimating the day of ovulation and not using contraceptive on safe days" was the method chosen by 70-80% of those who were practicing contraception.¹⁾ In association, one of every 4 married women experienced artificial abortion. Many young married

couples are ready to raise children if they fail in contraception, but failure in contraception often leads to artificial abortion especially in their teens and 40's. These statistics are related to the fact that 85% of respondents of a questionnaire about artificial abortion replied that they approved or conditionally approved abortion, indicating that the Japanese tend to choose abortion readily if contraception turns out to be unsuccessful. In such a background, propagation of knowledge about, and the development of correct attitudes to, contraception and planned childbirth have not been satisfactory in Japan. In the United States, on the other hand, contraceptive methods have been developed eagerly since the late 1950's. This boom of development of contraceptive measures was prompted by social demand for planned childbirth and sexual freedom. In Christian societies, which have been critical against artificial abortion, the importance of family planning and planned childbirth by means of sound contraceptive

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practices is advocated. Efforts to propagate the concept of reproductive health rights are made and realistic and diverse measures to put it into practice are taken in the United States although there remains unevenness in the spread of the idea over the entire society.

Practice of healthy and ethical contraception and planned childbirth cannot be ensured by spreading the knowledge of contraceptive methods alone. It requires sufficient mutual understanding, love, communication, cooperation, and agreement in married couples or between partners. Women as prospective mothers must be sufficiently responsible for their own health, and men must acquire sufficient knowledge about maternity and a cooperative attitude to women. Education of contraception and planned childbirth based on reproductive health rights will be effective only when it is understood with the above points included.

The Christian Church that conducted this study has provided 55 sessions since 1996 on subjects such as love of family for church-going married couples and their families in the local community. At the 56th session, videos about the childbirth and maternity were shown to engaged or newly married couples and their friends, and guidance in planned childbirth and contraceptive measures was given. A free-answering style questionnaire was performed after the session, the answers were analyzed with regard to "whether the subjects' interest in maternal and child health care was enhanced by learning contraceptive measures" (Objective 1) and "whether the subjects' willingness to practice contraceptive measures and to have planned childbirth increased" (Objective 2), and whether the concept of reproductive health rights is being realized in the field of maternal and child health care was evaluated.

Subjects and Methods

The subjects were 86 churchgoing newly married or engaged males and females and their friends who wished to receive guidance. A seminar was held to have the participants learn the dignity of human beings and the sacredness of sex and to increase their knowledge of and willingness to planned pregnancy and childbirth as part of the church's activities to improve the local maternal and child health. The procedure of the seminar was as follows.

1) Seeing a VTR on the birth of life

Video images of fertilization as the beginning of new life, processes of the development of the cell into a neonate through cell divisions and formation of tissues and organs, and fetuses responding to the mother's voice or her mood were shown. The aim of this part was to impress the participants about life, its birth, and its connection with maternity.

2) Presentation and exchange of opinions and impressions

Next, a session in which the participants presented their opinions and impressions about life, sex, and family planning was held.

3) Specific guidance in the ovulation mechanism and contraceptive measures

Finally, the sexual cycle, ovulation, hormone secretion, fertilizable period, and contraceptive techniques based on the Billings method were explained using a video, charts, and models, and specific examples of contraception were explained.

4) Writing opinions and impressions in the questionnaire

In the questionnaire, the participants wrote the knowledge obtained through the seminar and opinions and impressions by the constitutional method. They answered the questions, "What do you think of the woman's body?", "What do you think of the mechanism of birth of life as a gift from nature?", and "Do you want to adopt the Billings method in your family planning (birth planning)? If you do, why?" In addition, they were invited to write their opinions freely by, "Please write about what you feel hope."

Analyses were made by the following method.

1) Evaluation of the time and contents of the lecture and guidance

According to the classification by Yagi and Yoshizaki (1990) of (1) knowledge about the contents of the teaching materials, (2) knowledge about the teaching method, and (3) knowledge about the subjects, how the instructor used time and how much time he/she used to attain the two objectives of "enhancing the participants' interest in maternal and child health" and "enhancing the willingness of the participants to practice contraceptive methods

and planned childbirth" was analyzed. The analyses were performed by reviewing the records of the instructor's activities during the 120-minute seminar.

2) Qualitative analysis of questionnaire entries

From the questionnaire entries by the 86 subjects, major, intermediate, and minor items were selected according to the category system of Bales' linguistic interactive analysis³⁾.

3) Quantitative analysis of questionnaire entries

The percentages of the subjects who mentioned each of the major and intermediate items were calculated, and their relationships were examined. The number of intermediate items mentioned by each subject (0-3) was counted, and its rank correlations among the major items were evaluated.

Results

1) Contents and time allotment of the lecture

Of the 120-minute lecture time, two-thirds or 80 minutes were allotted to Objective 1, "Interest in maternal and child health care and reproductive health rights", and the remaining 40 minutes to Objective 2, "Developing the participants' willingness to practice contraceptive measures and to have planned childbirth" (Table 1).

Concerning Objective 1, "Interest in maternal and child health care", 27 minutes were used for understanding the participants, 25 minutes for presentation of the "contents of teaching materials", 15 minutes for "teaching methods", and 13 for others. First, there were introductory remarks and explanation of the objectives of the seminar, and considerable time was spent for establishing a relationship between the instructors and the participants. Then VTR and photographs were shown over 25 minutes (31.3%), and the contents of these materials were explained over 15 minutes.

Concerning Objective 2, "Developing the participants'

willingness to practice contraceptive measures and to have planned childbirth", only 10 minutes were used to establish a relationship with the participants, because this problem was brought up after Problem 1, and 18 minutes were used for presentation of the teaching materials, and 12 minutes for their explanation. Of the 40 minutes used for Objective 2, 40% was allotted to education using figures, pictures, and models.

Of the entire 120 minutes, a little more than one-third was used for presentation of teaching materials, a little less than one-third for establishing a relationship with the participants, and a little less than one-fourth for helping the participants understand the contents of the teaching materials. The instructors mentioned the impressiveness of birth of life and sympathy to the partner.

2) Analysis of questionnaire entries

2-1) Qualitative analysis of entries

The answers of the 86 participants to the questionnaire by the compositional method were evaluated using the category system of Bales' linguistic interactive analysis, and "expressions of impressiveness of birth of life (impression)", "expressions of love and gratefulness to the partner (affection)", and "expressions of cooperation in family planning (coordination)" were selected as three major categories of characteristic entries.

"Impression" consisted of three intermediate items, i.e. "feel", "impressed", and "understand". The three minor items of mystery, wonder, and impression were placed under "feel", the three minor items of thanks, delicate, and important under "impressed", and the three minor items of support, structures, and functions under "understand".

"Affection" consisted of the three intermediate items of "love", "important", and "protect". The minor items of works of nature, respect, and surprise were placed under "love", miracle, thanks,

Table 1. Time allotted by the instructor to various contents of the session (total 120 minutes)

Objective	Participants	Teaching materials	Teaching methods	Others	Total
Interest in maternal and child health	27	25	15	13	80 minutes
Willingness to planned childbirth	10	18	12	0	40 minutes
Total	37	43	27	13	120 minutes

and responsibility for birth were placed under "important", and dearness of life, mechanism of birth, and planned birth were placed under "protect".

Concerning "coordination", particular attention was paid to "whether the willingness to practice contraceptive measures has been enhanced", "whether the willingness to have planned childbirth has been expressed", and "whether the willingness to practice the Billings method has been expressed", and the three intermediate items of "agreement in thought", "agreement in rhythm", and "self-regulated" and the 9 minor items of efforts, responsibility, love of married couples, planned contraception, sexual cycle, health, spontaneous, not understanding, and distrust of the Billings method were established.

2-2) Qualitative analysis of entries

Concerning the major items, all participants mentioned something about "impression", 94.2%

mentioned "affection", and 98.8% mentioned "coordination". Table 2 shows the percentages of the participants who mentioned each of the intermediate items. Among the intermediate items of "impression", "feel", "moved", and "understand" were mentioned by 46.5%, 81.4%, and 64.0%, respectively. Among the intermediate items of "affection", "love", "important", and "protect" were mentioned by 59.3%, 67.4%, and 53.5%, respectively.

Among the intermediate items of "coordination", "agreement in thought" and "agreement in rhythm" were mentioned by 81.4% and 94.2%, respectively, but "self-regulated" was mentioned by only 8.1%. Many participants mentioned the importance and delicateness of life and the importance of harmony in thoughts and deeds between partners based on love and sense of responsibility.

2-3) Interrelations of questionnaire entries

Table 3 shows the frequencies of the appearance

Table 2. Categories of the participants' interest in maternal and child health, characteristic entries, and their frequencies

Category	Intermediate items	Minor items	Percentage of participants who mentioned the items
Impression	Feel	Mystery, wonder, impression	46.5%
	Impressed	Thanks, delicate, important	81.4%
	Understand	Support, structures, functions	64.0%
Affection	Love	Works of nature, respect, surprise	59.3%
	Important	Miracle, thanks, responsibility for birth	67.4%
	Protect	Dearness of life, mechanism of birth, planned birth	53.5%
Coordination	Agreement in thought	Efforts, responsibility, love of couple	81.4%
	Agreement in rhythm	Planned contraception, sexual cycles, health	94.2%
	Self-regulated	Spontaneous, not understandable, distrust of the Billings method	8.1%

Table 3. Contingency table of "love" and "coordination" and the results of χ^2 -test after the seminar

Percentages among the participants who mentioned impression (%)				
Affection	Mentioned or not mentioned	Feel	impressed	Understand
Love	Mentioned	60.8%**	90.2%*	72.5%*
	Not mentioned	25.7%	68.6%	51.4%
Important	Mentioned	51.7%	82.8%	74.1%**
	Not mentioned	35.7%	78.6%	42.9%
Protect	Mentioned	58.7%*	89.1%*	73.9%*
	Not mentioned	32.5%	72.5%	52.5%

*: Significant at 5% level

** : Significant at 1% level

of each intermediate item of "impression" according to the appearance of intermediate items of "love". Of those who mentioned "love", 90.2% mentioned "moved", 72.5% mentioned "understand", and 60.8% mentioned "feel". All these percentages were significantly higher than those in the participants who did not mention "love". Similarly, among those who mentioned "protect", 89.1% mentioned "moved", 73.9% mentioned "understand", and 58.7% mentioned "feel". These percentages were significantly higher than those in the participants who did not mention "protect". The relationship between "important" and "impression" was weaker, and a significant difference was observed only in "understand".

Next, Table 4 shows the frequencies of the intermediate items of "love" and "coordination" mentioned by the participants. No significant difference was observed in the frequency of the appearance of any of the intermediate items of "coordination" whether "love" was mentioned or not. "Important" was related to "agreement in rhythm", and "protect" was significantly related to "agreement in thought" and "self-regulated". However, the relationship between "love" and "coordination" was generally weaker than the relationship between "love" and "impression".

Table 5 shows Spearman's rank correlation coefficients of the relationships among the numbers

of intermediate items mentioned (0-3) in the 3 major categories. As the participant mentioned more items of "impression", he/she mentioned more items of "love" ($r=0.660, p<0.01$). "Coordination" showed no significant relationship with "impression" or "love".

Discussion

According to the entries in the questionnaire concerning the degree of understanding of planned childbirth, the participants favorably evaluated the teaching materials and guidance. All participants made entries related to impression concerning the teaching materials. Presentation of the video on the birth of life and the Billings method is considered to have impressed the participants with mysteriousness of life and to have been effective for enhancing their willingness to plan their pregnancy and to protect and bring up life. There were also many approving opinions about the guidance. During the 120-minute guidance, the teaching materials were presented, and opinions and impressions were exchanged. The guidance was always bi-directional and was intended to allow the participants realize that birth planning is their own problem and to provide solutions to it. The time and contents of the guidance are both considered satisfactory. Also, the participants are

Table 4. Contingency table between "love" and "coordination" and the results of χ^2 -test after the seminar

Affection	Percentages among the participants who mentioned coordination (%)			
	Mentioned or not mentioned	Agreement in thought	Agreement in rhythm	Self-regulated
Love	Mentioned	82.4%	96.1%	5.9%
	Not mentioned	80.0%	91.4%	11.4%
Important	Mentioned	82.8%	98.3%*	8.6%
	Not mentioned	78.6%	85.7%	7.1%
Protect	Mentioned	89.1%*	97.8%	17.5%**
	Not mentioned	72.5%	90.0%	0%

*: Significant at 5% level
 **: Significant at 1% level

Table 5. Spearman's rank correlation coefficients among "impression", "affection", and "coordination"

	Impression	Affection	Coordination
Impression	1.000	0.660**	0.159
Affection	0.660**	1.000	0.166
Coordination	0.159	0.166	1.000

** : Significant at 1% level (two-sided).

considered to have sufficiently understood both the contents and the intention of the seminar.

Most participants mentioned "love" in relation to "the development of health care behavior concerning maternal and child health (reproductive health rights)", were deeply impressed by the birth of life, and made entries about "affection". Markedly significant correlations were observed between the items of "impression" and "affection" as shown in Tables 3 and 5, and impressing the participants about the birth of life is considered to have exerted strong effects on "affection", which is an expression of desirable perception of maternal and child health. For example, this seminar helped the participants understand the delicateness, functions, and structures of the female body and develop the attitude to take good care of their own delicate bodies, which give birth to life. As a result, the participants acquired positive perception about birth of life by marriage.

Among various items of "affection" and "coordination", associations were observed between understanding of the importance of maternal and child health and cooperation in actions, between protecting the mother and child and agreement in thought, and between protecting the mother and child and being self-regulated. However, no significant difference was observed in the other items, and the relationship between "affection" and "coordination" is considered to be weaker than the relationship between "impression" and "affection". There appeared to be factors other than the "interest in and understanding of the relationship between the maternal health and pregnancy" that determine the willingness of couples to "cooperate each other to have planned pregnancy and childbirth".

According to the report of the 11th Basic Investigation of Trends of Childbirth conducted by the Research Institute of Population Problems, the number of children that married couples within 10 years after marriage want to have was reduced to 2.4, and the report ascribes this finding to an increase in married couples who want to have only one child.³⁾ To propagate the understanding of the importance of protecting the maternal health in childbirth is an important item of local mother and child health care activities particularly in the present trend of decreasing childbirth. The local maternal and child health care program that this

study evaluated was intended to a small voluntary group formed in daily church activities and was not arranged systematically by the administration. We reported this program to have been considerably effective and confirmed that such steady activities are important in local maternal and child health care service. We hope that the concept of reproductive health rights is propagated in various forms in the field of maternal and child health and that the concept is realized as actual practice.

The questionnaire was carried out anonymously and not requiring entries of the respondents' sex or age. This prevented analysis of the entries according to sex or age. We hope to further study differences in the degree of understanding about reproductive health between the sexes.

Note: The former version of this paper was written in Japanese and published in Bull. Sch. Allied Med. Sci., Nagasaki Univ. 14(1): 83-87, 2001

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