นิพนธ์ต้นฉบับ

The relationship of health perception, anxiety and self-care in normal primigravida adolescents at Phattalung hospital, Phattalung province.

Jetanasonti Thangsuvan* Poonsook Shuaytong*

Piangchan Rojanavipat* Chuangphit Meesawat**

Thangsuvan J, Shuaytong P, Rojanavipat P, Meesawat C. The relationship of health perception, anxiety and self-care in normal primigravida adolescents at Phattalung hospital, Phattalung province. Chula Med J 1997 Jul;41(7):523-34

Objective : To determine the relationship between health perception, anxiety and self-care in normal primigravida adolescents.

Design : Cross-sectional descriptive survey.

Setting : Antenatal care clinic, Phattalung Hospital, Phatthalung province.

Subjects : The sample was composed of 250 primigravida adolescents, with 28 weeks or more of normal pregnancy who attended the antenatal care clinic between 22 January and 29 March 1996.

Methods : Data was collected by using three parts of the self-administrated questionaires for the health perception, anxiety and the self-care during pregnancy. Statistics techniques implemented in the process of data analysis by SPSS/ PC⁺ program for percentage, mean, standard deviation including Pearson's Product Moment Correlation Coefficient.

Results : There was a significant positive correlation between the health status perception, the education level, the family income and the self- care at 0.001, 0.001, 0.01 level (r = 0.5075, 0.3005, 0.1673) respectively. And there

was a significant negative correlation between the anxiety level and the self-care at 0.001 level (r = -0.2278)

Conclusion : *The result of the study indicated that normal primigravida adolescents who had proper health perception and mild anxiety demonstrated good self-care.*

Key words : *Health perception, Anxiety, Self-care.*

Vol. 41 No. 7

July 1997

ความสัมพันธ์ระหว่างการรับรู้ภาวะสุขภาพ ความวิตกกังวลกับการดูแลตนเอง
ของหญิงวัยรุ่นครรภ์แรก ณ โรงพยาบาลพัทลุง จังหวัดพัทลุง

525

เจตน์สันติ์ แตงสุวรรณ, พูนสุข ช่วยทอง, เพียงจันทร์ โรจนวิภาต, ชวนพิศ มีสวัสดิ์. ความสัมพันธ์ระหว่างการรับรู้ภาวะสุขภาพ ความวิตกกังวลกับการดูแลตนเองของหญิงวัยรุ่นครรภ์แรก ณ โรงพยาบาลพัทลุง จังหวัดพัทลุง. จุฬาลงกรณ์เวชสาร 2540 ก.ค;41(7): 523-34

วัตถุประสงค์	:	*เพื่อศึกษาความสัมพันธ์ระหว่างการรับรู้ภาวะสุขภาพ ความวิตกกังวล กับการดูแลตนเองของหญิงวัยรุ่นครรภ์แรก*
รูปแบบการวิจัย	:	*การวิจัยเชิงสำรวจ แบบตัดขวาง*
สถานที่	:	*แผนกฝากครรภ์ โรงพยาบาลพัทลุง จังหวัดพัทลุง*
กลุ่มตัวอย่าง	:	*หญิงวัยรุ่นครรภ์แรกที่ตั้งครรภ์ปกติ มีอายุครรภ์ 28 สัปดาห์ขึ้นไป จำนวน 250 คน ที่มาฝากครรภ์ ณ แผนกฝากครรภ์ โรงพยาบาลพัทลุง จังหวัดพัทลุง ในระหว่างวันที่ 22 มกราคม 2539 ถึงวันที่ 29 มีนาคม 2539.*
วิธีการ	:	*การเก็บรวบรวมข้อมูลโดยใช้แบบสอบถาม การรับรู้ภาวะสุขภาพ, ความวิตกกังวลและการดูแลตนเองขณะตั้งครรภ์ โดยให้หญิงวัยรุ่นกลุ่มตัวอย่างตอบแบบสอบถามด้วยตนเอง วิเคราะห์ข้อมูลโดยใช้ โปรแกรมสำเร็จรูป SPSS/PC⁺ คำนวณค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และวิเคราะห์ความสัมพันธ์ของตัวแปร โดยใช้สัมประสิทธิ์สหสัมพันธ์เพียรสัน*
ผลการศึกษา	:	*พบว่า การรับรู้ภาวะสุขภาพขณะตั้งครรภ์ ระดับการศึกษา และรายได้ครอบครัว มีความสัมพันธ์ทางบวกกับการดูแลตนเองขณะตั้งครรภ์ของหญิงวัยรุ่นครรภ์แรก อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.001, 0.001, และ 0.01 ตามลำดับ (r = 0.5075, 0.3005 และ 0.1673 ตามลำดับ) ความวิตกกังวลขณะตั้งครรภ์มีความสัมพันธ์ทางลบกับการดูแลตนเองขณะตั้งครรภ์ของหญิงวัยรุ่นครรภ์แรก อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.001 (r = -0.2278)*
สรุป	:	*จากผลการศึกษาแสดงว่า หญิงวัยรุ่นครรภ์แรกที่มีการรับรู้ภาวะสุขภาพขณะตั้งครรภ์ถูกต้อง และมีระดับความวิตกกังวลต่ำ มีการดูแลตนเองขณะตั้งครรภ์ ถูกต้อง เหมาะสม*

The Ministry of Public Health has reported that pregnancy among the adolescent population in recent years has increased the proportion of live births among females aged 19 years and under. Between the years 1990 to 1993 the percentages were 13.5, 13.4, 13.0 and 12.9, respectively.[1] As a medical concern, immaturity in the adolescent mother's reproductive system and psychological state may be risk factors for both mother and child.[2] Also, emotional stress and anxiety can cause vasoconstrictition from increased sympathetic nervous system stimulation[3] which may result in a decrease of blood flow throughout the placenta. Additionally, infants born to adolescent mothers tend to be in danger of having low birth weights and being born prematurely.[4] For the mother, the major medical risks in adolescent pregnancy are toxemia, anemia and bleeding.[5] However those complications can usually be detected early in the pregnancy and treated by self-care and prenatal care. Adolescents who do not receive prenatal care have higher risks for low birth weight babies.[6] Also, perinatal mortality is higher in adolescent mothers who do not receive antenatal care than it is in those who do receive adequate antenatal care.[6] Therefore, self-care and prenatal care in primigravida adolescents are extremly influential to both the pregnant adolescent's health and the out come. According to Rosenstock[7], there are associations between health status preception and health behaviors. In addition, the adolescent who has a good health status perception is more effective in self-care during the course of the pregnancy.

Objectives

The main objective of this study was to determine the relationship between health perception, anxiety and self-care in normal primigravida adolescents.

Hypothesis

1. There is an association between health status perception and the quality of self-care during pregnancy.

2. There is an association between the anxiety level and the quality of self-care during pregnancy.

Materials and Methods

Research Methodology

The research design was a cross - sectional descriptive survey.

Population

At Phattalung Hospital, there was policy to encourage the pregnant women for improved the quality of self-care as the primary health care policy. Consequently, the population were those primigravida adolescents who attended the antenatal care clinic at the government hospital, Phattalung Province, located in the southern region of Thailand.

Sample and Sample Size

The samples size was calculated from the formula

$$n = \frac{Z^2 \; \alpha/2P(1-P)}{d^2}$$

at P= inadequate self care during the course of pregnancy rate = 0.150. Hence the sample was 250

primigravida adolescents who attended the antenatal care (ANC) clinic during January through March 1996. The sample characteristics were as follows: under 20 yrs age, gestational age of 28 weeks or more, no complications in the pregnancy, illiteracy, and co-operative with the study.

Data collection

The data were collected from the study samples who were all primigravida adolescents satisfied enrollment criteria by using self-administrated questionaires during January through March 1996 at the antenatal care clinic.

Instruments

The instruments used in this research were composed of four self-administered questionnaires. The parts were as follows:

Part 1) The characteristics of the primigravida adolescents.

Part 2) The health status perception questionnaire was constructed and modified by the researcher according to Becker's Health Belief Model.[8] The model consists of five topics; 1) high risk pregnancy 2) severity of the complications of pregnancy 3) benefits of self-care practice during pregnancy 4) barriers to self-care practice during pregnancy and 5) motivation in regards to health. The five topics of the health status perception questionnaire were included 27 questions in the Likert scale (1-5 scores) and the range = 27-135 scores.

Part 3) A state-anxiety Inventory constructed and standardized by Dr.Charles

Speilberger.[9] A state-anxiety questionaire consisted of 20 questions in the Likert scale (1-4 scores) and the range = 20-80 scores

Part 4) The self-care during pregnancy questionnaire was constructed by the researcher who modified the self-care contents of Lowenstein and Rinehart's questionnaire.[10]

The questionnaire consisted of the following four topics: 1) nutrition 2) health prevention 3) appropriate daily activities for pregnant adolescents and 4) mental health care. The four topics of the self-care questionaire were included 42 questions in the Likert scale (1-4 scores) and the range = 42-168 scores.

Criteria in classification of the health status perception, the anxiety level and the self-care base on the assumption of the normal destribution of sample data i.e. $X \pm SD$.

Validity and Reliability

A team of experts examined and commented on the validity of the content of the questionnaires. Measurements of reliability were calculated seperately for each test administered. The Cronbach's coefficient alpha was as follows: 1) health status perception was 0.73 2) a state anxiety inventory was 0.82 and 3) self-care during pregnancy was 0.76.

Statistical analysis

Data analysis used an SPSS/PC program, percentage, mean, standard deviation, and Pearson's Product Moment Correlation Coefficient.

Results

The primigravida subjects consisted of 94.8% late adolesents (17-19 yrs.), 92% of whom were living with their husbands. 66.8% had completed primary school and 55.6% had family incomes of 3,000-5,999 baht/month, as shown in Table 1.

Table 1. The Number and Percentage Distribution of Primigavida Adolescents Classified by Characteristic Factors.

Characteristic Factors	No (n= 250)	%
Age(yrs)		
14-16	13	5.2
17-19	237	94.8
($\overline{X}$ = 18.32, S.D. = 0.89, Range = 14.19)		
Marital Status		
Living with husband	230	92.0
No living with husband	20	8.0
- Divorce	2	0.8
- Separate	18	7.2
Level of education (Year)		
- Primary school	167	66.8
- Secondary school	56	22.4
- High school	27	10.8
($\overline{X}$ = 7.28, S.D. = 2.0, Range = 5-12)		
Family income (Baht/Month)		
- No income	2	0.8
- < 3,000	21	8.4
- 3,000 - 3,999	47	18.8
- 4,000 - 4,999	36	14.4
- 5,000 - 5,999	56	22.4
- 6,000 - 7,999	28	11.2
- 8,000 - 9,999	24	9.6
- > 10,000	36	14.4
($\overline{X}$ = 5,879.2, S.D. = 4,199.6, Range = 0-40,000)		

Vol. 41 No. 7
July 1997

ความสัมพันธ์ระหว่างการรับรู้ภาวะสุขภาพ ความวิตกกังวลกับการดูแลตนเอง
ของหญิงวัยรุ่นครรภ์แรก ณ โรงพยาบาลพัทลุง จังหวัดพัทลุง

529

The health status perception of the primigravida adolescents during pregnancy were 68.4% moderate level, 17.6% good level, and 14.0% poor level, as shown in Table 2. These results were classified into five topics that consisted of the mean scores of the perceptions of high risk pregnancy, the severity of complications in pregnancy, the benefits of self-care practice during pregnancy, the barriers to self-care practice during pregnancy and motivations regarding health. The mean scores were 16.27, 15.50, 32.56, 23.01, 18.42, respectively, as shown in Table 3.

Table 2. The Number and Percentage of Primigravida Adolescents Classified by Health Status Perception.

Health Status Perception (Score)	No (n= 250)	%
Not good (< 96.01)	35	14.0
Mederate (96.01 - 115.49)	171	68.4
Good (> 115.49)	44	17.6
($\overline{X}$ = 105.75, S.D. = 9.74, Range = 79 - 127)		

Table 3. Mean and Standard Deviations of Health Status Perception During Pregnancy.

Health Status Perception	Items	Total score	$\overline{X}$	S.D.
- High risk pregnancy	5	25	16.27	3.03
- Severity of complication of pregnancy	5	25	15.50	3.11
- Benefits of self-care practice during pregnancy	8	40	32.56	4.77
- Barriers to self-care practice during pregnancy	5	25	23.01	23.99
- Motivation regarding health	4	20	18.42	2.00

The anxiety level of the primigravida adolescents was 78.0% moderate level, 15.6% high level and 6.4% mild level, as shown in Table 4. With self-care practice during pregnancy, the majority, 69.2% were at the moderate level. There were 16.4% found to be at the good level, while the poor level was 14.4%, as shown in Table 5 and the details are presented in Table 6.

Table 4. Number and Percentage of the Sample Classified by the Anxiety Level During Pregnancy.

The Anxiety Level (Score)	No (n= 250)	%
- Mild (< 29.87)	16	6.4
- Moderate (29.87 - 46.53)	195	78.0
- High (> 56.53)	39	15.6
($\overline{X}$ = 39.44. S.D. = 7.09, Range = 21 - 65)		

Table 5. The Number and Percentage of the Sample Classified by The Self-Care During Pregnancy.

Self – Care (Score)	No (n= 250)	%
- Poor level (< 115.86)	36	14.4
- Moderate level (115.86 - 137.52)	173	69.2
- Good level (> 137.52)	41	16.4
($\overline{X}$ = 123.45, S.D. = 10.56, Range = 97-153)		

Table 6. The Number and Percentage of Sample Classified by 4 topics of the Self-Care During Pregnancy.

Self-Care (Score)	No (n= 250)	%
Nutrition ($\overline{X}$ = 26.79, S.D. = 2.56, Range = 20-34)		
Poor level (< 24.23)	43	17.2
Moderate level (24.23-29.35)	170	68.0
Good level (> 29.35)	37	14.8
Health prevention ($\overline{X}$ = 42.46, S.D. = 6.56, Range = 30-60)		
Poor level (< 35.90)	32	12.8
Moderate level (35.90-49.12)	173	69.2
Good level (> 49.12)	45	18.0

Vol. 41 No. 7
July 1997

ความสัมพันธ์ระหว่างการรับรู้ภาวะสุขภาพ ความวิตกกังวลกับการดูแลตนเอง
ของหญิงวัยรุ่นครรภ์แรก ณ โรงพยาบาลพัทลุง จังหวัดพัทลุง

531

Table 6. The Number and Percentage of the Sample Classified by 4 topics of the Self-Care During Pregnancy.

Self-Care (Score)	No (n= 250)	%
Daily Activity ($\overline{X}$ = 27.82, S.D. = 3.10, Range = 16-36)		
Poor level (< 24.72)	36	14.4
Moderate level (24.72-30.92)	165	66.0
Good level (> 30.92)	49	19.6
Mental Health ($\overline{X}$ = 29.62, S.D. = 3.45, Range = 20-36)		
Poor level (< 26.17)	45	18.0
Moderate level (26.17-33.07)	170	68.0
Good level (> 33.07)	35	14.0

There was a positive association found between health status perception and total self-care during the pregnancy with r = 0.5075 (P < .001). Also, the education level and the family income were found to have a positive association with self-care during pregnancy with r = 0.3005 (P < .001) and r = 0.1673 (P < .01), respecitvely. And there was a significant negative correlation between the anxiety level and the self-care with r = -0.2278 (P<.001). The details are presented in Table 7.

Table 7. Pearson's Product Moment Correlation Coefficient Between Health Status Perception, The Anxiety Level, Characteristic Factors, and Self-Care.

Variables	r
- Total health status perception	0.5075**
- Hith risk pregnancy	0.2500**
- Severity of complication of pregnancy	0.2583**
- Benefits of self practising	0.4079**
- Barriers of self practising	0.2177**
- Motivation regarding health	0.3906**
- Anxiety	-0.2278**
- Age	0.0272
- Marital status	0.0316
- Education	0.3005**
- Family income	0.1673*

* P-value < .01

** P-value < .001

Discussion

In conclusion, there is a positive relationship between good health perception during pregnancy and how the primigravida adolescents take care of themselves. According to statistics at the level of 0.001 (r = 0.5075) it was established that primigravida adolescents with proper health perception took good care of themselves during their pregnancy. This can also imply that anyone who is informed on a particular situation will know better how to respond or react when the situation arises. Health perception is one of the basic qualifications which people need in order to be able to take better care of themselves. Therefore, people who have proper information on health perception can take better care of themselves. According to Rosenstock, people who know about a particular disease can help prevent its development or minimize the risks of the disease.[7] The results of our research, which are consistent with the Rosenstock theory, showed that primigravida adolescents in the study understood the complications of pregnancy and the possible harm to themselves and their babies. Consequently, they were interested in proper methods of taking care of themselves to avoid those complications. In addition, anxiety can have a negative effect on self-care during the pregnancy of primigravida adolescents. Statistics at the level of 0.001 (r= -0.2278) established that primigravida adolescents who had mild anxiety took care of themselves properly. Primigravida adolescents with high anxiety did not show good self-care. This can mean that anxiety can result in instability in the pregnant adolescent's emotion. Thus adolescents can act inappropriately and in an unpredictable fashion. For example, she may have nausea, vomitting, indigestion, weakness, insomnia[11] etc. The study of Otrakul A, et al.[12] in 1986 which stated that severe nausea and vomitting was considered the main characteristics which showed physiological and psychalogical changes during the period of pregnancy due to high stress level.

Besides, this result are consistent with the study of Thangsuvan J. et al.[13] which reported that in 1989, the anxiety level of the 300 primigravidas who attended the antenatal care clinic at Rajvithi hospital had negative significant correlation with adaptation to mother role with r = -0.547 (p<0.05). On the other hand , a mild anxiety level can have a positive effect, as seen in our primigravida adolescents, where it caused the adolescents to develop proper self-care.

Recommendation

According to limited time therefore, this study can not search others factors which could effect the health perception and anxiety during pregnancy which shall be further studied and found out such as the gestational age of pregnancy at first antenatal visit, a number of antenatal care visit, the opinion on pregnancy from family's relatives and social supports.

Vol. 41 No. 7
July 1997

ความสัมพันธ์ระหว่างการรับรู้ภาวะสุขภาพ ความวิตกกังวลกับการดูแลตนเอง
ของหญิงวัยรุ่นครรภ์แรก ณ โรงพยาบาลพัทลุง จังหวัดพัทลุง

533

Application

1. Self-care during adolescent pregnancy can be influenced by proper health perception of high risk pregnancy, understanding the benefits of self-care practice, understanding the obstacles in self-care, and being aware of the severity of complications in pregnancy (table 3). This can be done either through an antenatal care programme or via the public media.

2. Health care providers should encourage pregnant adolescents to take care of themselves properly by providing proper information concerning the four topics of self-care: nutrition, health maintenance daily activity and mental health care during the pregnancy (table 6).

3. Counseling clinics should be established in order to reduce pregnant adolescent's anxiety and to provide training for coping with high levels of anxiety.

References

1. Ministry of Public Health. Public HealthStatisticsA.D. 1994. Division of Health Statistics Bureau of Health Policy and Plan Office of the Permanent Secretary, 1994: 30

2. Diann L. Smith. Meeting the Psychosocial Needs of Teen-age Mothers and Fathers. Nurs Clin North Am 1984 Jun; 19(2): 369-71

3. Dudley DL, Welke E. The Need to Adapt to Stress. In:Soresen KC, Luckmann J,

eds. Basic Nursing; a Psychophysiologic Approach. 2nd ed. Philadelphia: W.B. Saunders,1986: 36-37

4. Suwachai Intaraprasert. Teenage Pregnancy. In: Kamheang Chaturachinda. Obstetric Ramathibodi. 2nd ed. Bangkok: Pabpim , 1988: 518

5. Iris F. Litt, John A. Martin. Development of Sexuality and Its Problems. In: Levine MD, Crey WB, Crocker AC. Developmental-Behavioral Pediatrics. 2nd ed. Philadelphia: W.B. Saunders, 1992: 436

6. Renu Sri-Smith. Perinatal Mortarity Chiang Rai Prachanukroh Hospital 1992- 1994. J Med Assoc Thai 1996 Jan; 79(1): 16-8

7. Rosenstock IM. Historical Origins of the Health Belief Model. Health Education Monographs 1974 winter; 2(4): 328-35

8. Becker HM, Drachman RH, Kircht JP. A New Approach to Explaining sick-role Behavior in Low Income Population. Am J Public Health 1974 March; 64(2): 205-216

9. Spielberger CD, Gorsuch RL, Lushere RE. STAI MANUAL. California: Consulting Psychologists Press, 1970: 3-20

10. Lowenstein V, Rinehart JM. Psychosocial Factors Related to Health Maintenance Behaviors of Pregnant Women. In : Sydney, DK. Natalie P, eds. Reading for Nursing Research. Saint Louis: C.V. Mosby, 1981: 246-58

11. Gaffney KF. Maternal-fetal attachment in relation to self-concept and anxiety. Matern Child Nurs J 1986 Summer; 15(2): 91-101

12. Otrakul A, Srisorrachatr S, Thangsuvan J ,Rojanasaksunthorn S. The survey of stress in pregnancy. J Public Health 1990

Jan; 20(1):34-6

13. Thangsuvan J, Wacharasin C, Shuaytong P, Srisorrachatr S. The relationship between anxiety, marital relationship and adaptation to mother role in normal primigravida. J Health Edu 1996 Sep-Dec; 19(74): 32-6