COUPLES' SATISFACTION WITH HEALTH CARE SERVICE DURING LABOR AND DELIVERY

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The purpose of this study was to examine consumer satisfaction with health care service during labor and delivery. An exploratory study was conducted by obtaining information from 191 couples who were hospitalized at one medical center in southern Taiwan. A Consumer Satisfaction Questionnaire with three additional open questions developed by the authors and a Social Support Scale modified from the Family APGAR Index were administered. Factor analysis identified the following three factors most often associated with consumers' satisfaction with labor and delivery during hospitalization: (1) the Supply of Equipment, (2) the Participants in the Delivery and (3) the Management of the Ward. Moreover, the level of couples' satisfaction with hospitalization during labor and delivery was significantly correlated with high professional support. Suggestions are also made for future efforts in quality of care and consumer satisfaction.

Key words: couples, labor and delivery, satisfaction

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Because a favorable image is important in competitive markets, a hospital should ensure the highest level of patient satisfaction not only to maintain its current patient base but also to expand it. Kerfoot and LeClair[1] point out that quality patient care is ultimately defined by the customer, not the care provider. What consumers perceive as its benefits is valuable information for administrators, as well as for hospital staff.

Consumers define "quality of care" according to their perceptions of factors related to their physical and psychological comfort[2]. Risser[3] identified three main factors as important components of patient satisfaction with quality of care: technical-professional factors, trusting relationship factors, and educational factors. Cleary's survey[4] indicated that obstetric patients were dissatisfied with health education. In Danziger's observational data[5], nurses and physicians were found to offer arbitrary, uniform, and often inappropriate responses to women giving birth. The amount of technical and emotional help, and information received from the medical staff have been reported to be important factors in patient satisfaction with health care[6-7].

In addition, the literature consistently points to the positive effects of professional support offered by medical staff during hospitalization, which appears to be one of the most important factors influencing women's satisfaction with health care during labor and delivery[8-11]. Shields[12] examined subjective needs of laboring women and found supportive care was the most critical factor during their labor. Other studies[13,14] have indicated that patients rate availability of the nurses, personalized care, and friendliness and courtesy as the top three components of quality care.

Recently, advanced technology and obstetric knowledge have made childbirth relatively safe for both mother and neonate. As a result, attention has shifted to the quality of the birth experience. A more family-centered focus in obstetric care has emerged. Therefore, to examine health care services, especially in the labor and delivery phase, both the woman and her partner's opinion should be included as important criteria.

This study was undertaken to provide a picture of childbearing couples' expectations for health care during their labor and delivery and to identify the factors that influence couples perception of satisfactory and unsatisfactory health care. With this information, hospital management can work more effectively to improve the quality of health service.

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METHODS

Sample

A nonrandom convenient sample of 114 wives and 77 husbands was selected from the postpartum unit immediately after labor and delivery at a medical center in southern Taiwan. The couples were chosen on the basis that they (a) had participated in and experienced an uncomplicated labor and vaginal delivery no longer than 48-72 hours before completing the questionnaire, and they (b) had delivered a healthy infant of 37 or more weeks gestation at the medical center. Thirty-seven husbands were not included in the study because they had not participated in their wives' labor and delivery process or they were absent from the ward when the study was conducted.

Instruments

Consumer satisfaction questionnaire: the questionnaire is a 19-item, 5-point Likert scale and was used to measure couples' perceptions of satisfaction in the area of labor and delivery care This questionnaire was developed from a review of the literature [3,4,13,15], patient interviews, and one pretest involving 20 couples in the setting later used for data collection. In order to estimate the time needed to complete questionnaires, evaluate clarity and utility of directions, couples' reactions were solicited in relation to questionnaire length, comprehensiveness, and pertinence. Responses to the pretest indicated the items spanned the content area well. Only two items that patients deemed inappropriate to their setting were eliminated. Construct validity was applied and Cronbach's alpha reliability coefficient of .93 was obtained. Values from 1 to 5 were assigned to each scale item with "very dissatisfied" having a value of 1 and "very satisfied" being valued at 5. Higher values coincide with higher satisfactory perceptions. The consumer satisfaction questionnaire scores ranged from a minimum of 17 to a maximum of 85.

Social support scale: the scale is a 10-item, 5-point Likert scale and includes the Family APGAR and the Medical Staff APGAR. Items were scored using a 1 (not at all) to 5 (always) scale and the range of possible total scores was 10 to 50. The total score represents the frequency with which social support was accepted from either the family or medical staff during labor and delivery. The Family APGAR was developed by Smilkstein [16] and the authors of the present study developed the Medical Staff APGAR, which is a modified version of the Family APGAR. The revised instrument was pilot tested on a group of 20 couples. Construct validity was used and the coefficient of Cronbach's alpha reliability was .87.

In addition, three open-ended questions which allowed couples to make comments and suggestions regarding health care services during their labor and delivery were contained. Demographic data was also collected.

Procedure

Qualifying couples were visited after being admitted to the postpartum unit and the questionnaires were distributed to them. Informed consent was implied with return of the questionnaire. Confidentiality was maintained and no names appeared on the questionnaires. Data were analyzed using SPSS/PC package.

RESULTS

Characteristics of Subjects: among the available 114 wives and 77 husbands, the average age was 29 years for the wives and 32 years for the husbands. The average length of marriage was 47 months. Both of the wives (92.2%) and the husbands (90.9%) had obtained senior high school or junior college diplomas, or university degrees. The major religions stated were Buddhism or Taoism. 64.91%. of the wives were employed. Multipara was more than primipara (60.53% vs. 37.72%). 88.6% of wives expected their husbands to be present during childbirth process and 87.01% of the husbands had been involved in their wives' labor and delivery process (Table 1).

Ranking of Couples' Satisfaction during Labor and Delivery: table 2 shows frequency and percentage of the couples' satisfaction level during labor and delivery. There were only 4 items whose means reached to 4.0 or above with a mean of 3.86 (Table 3), which indicates that couples perceived these 4 items as being of from satisfactory to very satisfactory. In addition the top three areas of satisfaction perceived by the couples were "a companion being allowed to be present in the delivery room," "medical staff's attitude," and "medical staff's technique." However, the top three items that couples perceived as most dissatisfactory in descending order were

Table 1. Demographic characteristics of the subjects

Demographic characteristics	Wife Mean ± SD (or) n=114	%	Husband Mean ± SD (or) n=77	%
Age (years)	29.48 ± 3.38		32.07 ± 4.29	
Length of marriage (months)	47.50 ± 31.17			
Education				
primary school	2	1.75	1	1.30
junior high school	5	4.39	1	1.30
senior high school	47	41.23	23	29.87
junior college	34	29.82	26	33.77
university	24	21.05	21	27.27
graduate or above	1	0.88	5	6.49
missing	1	0.88		
Religion				
Buddhism or Taoism	76	66.67	52	67.53
Christianity	7	6.14	2	2.60
others	3	2.63	2	2.60
none	24	21.05	20	25.97
missing	4	3.51	1	1.30
Occupation				
housekeeping	39	34.21		
employee	74	64.91	73	94.81
missing	1	0.88	4	5.19
Status of this pregnancy				
planned	41	35.96	30	38.96
unplanned	46	40.35	31	40.26
neither of the above	27	23.68	15	19.48
missing			1	1.30
Number of sons				
0	40	35.09		
1	51	44.74		
2	20	17.54		
3	1	0.88		
missing	2	1.75		
Number of daughters				
0	31	27.19		
1	62	54.39		
2	14	12.28		
3	5	4.39		
missing	2	1.75		
Number of children				
1	43	37.72		
2	52	45.61		
3	16	14.04		
4	1	0.88		
missing	2	1.75		
Wife's expectation of husband's participation in childbirth				
did	101	88.60		
did not	11	9.65		
missing	2	1.75		
Husband's childbirth participation				
did			67	87.01
did not			9	11.69
missing			1	1.30

Table 2. The Couples' satisfaction level during labor and delivery

Satisfaction level (score)	5	4	3	2	1
Items	n %	n %	n %	n %	n %
1. Privacy during medical examination	39(20.4)	114(59.7)	37(19.4)	1(0.5)	
2. Quietness of the ward	35(18.3)	88(46.1)	56(29.3)	10(5.2)	2(1.0)
3. Cleanliness of the ward	23(12.0)	108(56.5)	57(29.8)	3(1.6)	
4. Explanations of procedures and treatments	24(12.8)	88(46.8)	65(34.6)	10(5.3)	1(0.5)
5. The orientation to ward surroundings	12(6.3)	65(34.0)	93(48.7)	20(10.5)	1(0.5)
6. Labor pain treatment	28(14.7)	96(50.3)	57(29.8)	9(4.7)	1(0.5)
7. Being informed about labor progress	38(19.9)	93(48.7)	52(27.2)	8(4.2)	
8. Mental support	46(24.1)	92(48.2)	43(22.5)	10(5.2)	
9. Physical care	41(21.5)	90(47.1)	56(29.3)	4(2.1)	
10. Ward facilities	24(12.6)	100(52.4)	62(32.5)	3(1.6)	2(1.0)
11. Bedside furniture	17(8.9)	84(44.0)	78(40.8)	10(5.2)	2(1.0)
12. A companion being allowed to be present in the delivery room	84(44.2)	93(48.9)	11(5.8)	2(1.1)	
13. The medical staff's attitude	74(38.7)	94(49.2)	22(11.5)	1(0.5)	
14. The medical staff's technique	59(30.9)	111(58.1)	21(11.0)		
15. Health education	42(22.0)	103(53.9)	41(21.5)	4(2.1)	1(0.5)
16. Service hours	32(16.8)	103(54.2)	49(25.8)	5(2.6)	1(0.5)
17. The overall satisfaction	44(23.3)	113(59.8)	31(16.4)	1(0.5)	

Note: Scores were based on a 5-point scale with 1 =very dissatisfied and 5=very satisfied.

Table 3. Ranking of couples' satisfaction during labor and delivery

Items	Mean ± SD	Rank
1. Privacy during medical examination	4.00 ± .65	4
2. Quietness of the ward	3.75 ± .85	10
3. Cleanliness of the ward	3.79 ± .66	9
4. Explanations of procedures and treatments	3.66 ± .79	12 ☆
5. The orientation to ward surroundings	3.35 ± .77	14 ☆
6. Labor pain treatment	3.74 ± .78	11
7. Being informed about labor progress	3.84 ± .79	8
8. Mental support	3.91 ± .82	6
9. Physical care	3.88 ± .76	7
10. Ward facilities	3.74 ± .74	11
11. Bedside furniture	3.54 ± .77	13 ☆
12. A companion being allowed to be present in the delivery room	4.36 ± .64	1 ★
13. The medical staff's attitude	4.26 ± .68	2 ★
14. The medical staff's technique	4.20 ± .62	3 ★
15. Health education	3.95 ± .75	5
16. Service hours	3.84 ± .75	8
17. The overall satisfaction	4.06 ± .65	

★:the top three satisfied items
☆:the top three dissatisfied items

Table 4. Item loadings for the three factors on couples' satisfaction during labor and delivery

Factor 1. The supply of equipment	Factor loading
1. Ward facilities	.80
2. Physical care	.79
3. Bedside furniture	.72
4. Labor pain treatment	.66
5. Mental support	.66
6. Being informed about labor progress	.65
7. The orientation to ward surroundings	.65
8. Service hours	.61
9. Health education	.60
10. Explanations of procedures and treatments	.60
Factor 2. The participants in the delivery	
1. A companion being allowed to be present in the delivery room	.74
2. The medical staff's technique	.74
3. The medical staff's attitude	.69
Factor 3. The management of the ward	
1. Quietness of the ward	.79
2. Privacy during medical examination	.75
3. Cleanliness of the ward	.71

"the orientation to ward surroundings," "bedside furniture," and "explanations of procedures and treatments".

Factors of Couples' Satisfaction: the three factors of couples' satisfaction were clearly recognized by principal component analysis (Table 4). Factor 1 was "the supply of equipment," which included items related to available ward resources for labor and delivery, such as "Ward facilities," "Labor pain treatment," "Service hours," and so on. Total items were 10. Factor 2 was "the participants in the delivery," which included items related to persons engaged in childbirth process, such as "a companion being allowed to present in the delivery room," "the medical staff's technique," and "the medical staff's attitude." The total was 3 items. Factor 3 was "the management of the ward," which included items related to an orderly arrangement of the ward, such as "Quietness of the ward," "Privacy during medical examination," and "Cleanliness of the ward." Total items were 3. The proportion of variance for each factor was 50.8%, 7.5% and 6.4%, respectively. These three factors accounted for 64.8% of the variance.

Suggestions Made by The Couples: seventy-nine out of 191 postpartum couples made suggestions related to the labor and delivery setting. The top three suggestions regarded "noise," "equipment not being enough," and "furniture being too old or broken." Most of the couples (27.85%) complained that the setting was too noisy, the source of the noise mostly being the nurse station, other visitors, vendors, cleaning women, and broadcasts from the ward P.A. system. Furthermore, with poor sound insulation a moan of labor pain from the next room spread throughout the ward. In addition, the lack of equipment, including having only one public toilet without toilet paper, having no extra bed blanket for the childbearer's companion, having no picture taken of newborn in delivery room, having no relaxing music in the labor or delivery room, and so on, were mentioned by 22.78% couples. The couples (18.99%) also considered such items as window curtains, ceilings and doors to be too old or in ill repair. They thought the walls needed repainting and the lights in the delivery room were dismal. Table 5, a list of all suggestions, also sheds considerable light on the question of couple satisfaction.

Reasons for Choosing The Hospital as Childbirth Location: table 6 shows the reasons that 175 of the 191 couples chose this hospital to give birth. According to priority, the top three reasons were "medical staff's ability," "hospital

Table 5. Suggestions made by the couples

Suggestions	n=79	%
1. Noise	22	27.85
2. Eguipment not being enough	18	22.78
3. Furniture being too old or broken	15	18.99
4 Poor air-condition	9	11.39
5. Few suites	6	7.59
6. Lack of heated food supply after delivery	5	6.33
7. Poor hygienic conditions	4	5.06
8. Labor room too small	4	5.06
9. Lack of security	3	3.80
10. Others	21	26.58

Note: multiple suggestions from the couples

equipment," and "proximity to the house or office," which were 35.43%, 23.43% and 21.71%, respectively.

Factors of Social Support: two factors for social support that were apparent using principal component analysis. Factor 1 was "medical staff support," which included items related to the medical staff's help and support. Total items were 5. Factor 2 was "family support," which included items related to the family help and support. Total items were 5. The proportion of variance for each factor was 47.0% and 26.7%, respectively, accounting for 73.7% of the variance.

The Relationship Between the Factors of Couples' Satisfaction and Factors of Social Support: the level of couples' satisfaction with health care during labor and delivery was significantly correlated with high social support ($r = .36$, $p < .001$), especially with medical staff support. The Pearson Correlation Coefficients indicated that both the medical staff support and family support were each significant in a positive correlation with "the participants in the delivery factor" ($r = .33$, $p < .001$; $r = .18$, $p < .01$). Medical staff support was positively correlated with "the management of the ward factor" ($r = .21$, $p < .001$) and "the supply of equipment factor" ($r = .41$, $< .001$).

DISCUSSION

Patient satisfaction with quality of care has been reported as the strongest predictor of overall hospital satisfaction[6,7]. Results of this study indicate that three factors, the supply of equipment, the participants in the delivery, and the management of the ward, are important to couples' satisfaction with health care during labor and delivery. Most of the couples in this study rated satisfaction with health care service to be satisfactory based on a 5-point scale. Moreover, a companion being allowed to be present in the delivery and the medical staff's attitude and technique were the top three areas of satisfaction perceived by the couples. A high degree of consistency exists between the results of the current study and the studies by Hodnett and Osborn (1989) and Risser (1975). Furthermore, women's expectation of their husbands' involvement during labor and delivery explains the trend for man's childbirth participation. That the medical center opens the door and allows a companion to be present in the delivery room is really a welcome policy.

Professional support is valued highly by women during childbirth[8,9,11,17] and the perception of professional support from caring medical staff has been shown to enhance the couples' coping efforts and positive feelings about their labor experience[8,17]. The results support the findings of Abramowitz *et al.* [13] in that the level of couple satisfaction with health care was significantly correlated with high medical staff support. Therefore, having medical staff with a high degree of interpersonal skills is necessary in the care of laboring couples in addition to technical competence.

However, much of the dissatisfactory revealed related to bodily comforts rather than to technical aspects, suggesting that, as the front-line caregivers often seen as responsible for all activities in the facility, nurses need to become

Table 6. Reasons for choosing the hospital as childbirth location

Reasons	n=175	%
1. Medical staff's ability	62	35.43
2. Hospital equipment	41	23.43
3. Proximity to the house or office	38	21.71
4. Traffic convenience	24	13.71
5. Recommendation by relatives or friends	23	13.14
6. Being familiar with the hospital	20	11.43
7. Employee	17	9.71
8. Security	13	7.43
9. A good reputation as a medical center	12	6.86
10. Confidence	8	4.57
11. Medical chart completed	2	1.14
12. A companion being allowed to present in the delivery room	2	1.14
13. Cleanliness of the environment	2	1.14

Note: multiple options from the couples

more familiar with their consumers' needs and preferences. Prior to admission, couples should be given pamphlets or orientation tours of the maternity-newborn unit, which would convey information about hospital procedures and what to expect during their stay. Pamphlets and orientations would encourage more realistic expectations, which would in turn help increase satisfaction with the hospital stay. Furthermore, medical staff must be sure that all procedures and regulations are fully explained so that the consumers' anxieties are alleviated and their dignity left intact.

Rest and comfort are major issues to those who are suffering labor pain and their companions[18]. Noise levels and lack of bedside furniture can be major factors in determining satisfaction with hospitalization. Hospital managers, who are increasingly concerned with marketing issues, may be able to use this type of customer information to improve the attractiveness of their facilities.

Instead of providing the current stress-inducing environment, we believe that a successful consumer focus and professional support will help us create comfortable hospitals of healing. To succeed in tomorrow's highly competitive marketplace, hospital management should determine consumer expectations of their health care providers and the factors that affect patient satisfaction with their hospital experiences and explore ways to resolve the differences between consumer expectations and current professional services.

LIMITATIONS

The generalizability of this study is limited due to the sample size, nonrandom sampling method and timing of data collection 2 to 3 days postpartum. It is possible that postnatal couples, in the days immediately after birth, may hesitate to criticize the care they have received, especially when they are still hospitalized. Moreover, with any study on consumer satisfaction with health care, the halo effect may have been operating. The happy and welcome birth of a healthy baby may compensate for any negative experiences.

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待產夫婦於住院期間的醫療照顧滿意度

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本研究的目的是在南台灣一所醫學中心以立意取樣的方式，探討待產夫婦於住院期間的醫療照顧滿意度以及社會支持程度。由作者發展出來的「醫療照顧滿意度量表」和三題開放性問卷，以及由「家庭關懷指數量表」修改而成的「社會支持量表」，施測於 191 位夫婦。經由因素分析，研究結果發現待產夫婦於住院期間有關醫療照顧滿意度的三個因素分別爲(1)病房的設備；(2)參與分娩的人員；(3)病室的管理。同時待產夫婦於住院期間的醫療照顧滿意度與來自醫護人員的專業支持呈正相關。另外，本文亦針對病人照顧品質和醫療照顧滿意度的改善措施討論於後。

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