

ORIGINAL RESEARCH ARTICLE

Women's satisfaction with maternity experience at a regional hospital in Swaziland: A cross sectional survey

DOI: 10.29063/ajrh2021/v25i3.11

Zwakele Z Tfwala^{1*} and Nai-Wen Kuo²

Swaziland Ministry of Health, National TB Control Programme¹; Taipei Medical University, School of Health Care Administration²

*For Correspondence: Email: tmzethy@gmail.com; Phone: +268 76590655

Abstract

Clinical care during labor and childbirth is important, however understanding women's preferences and experiences have become more important in assessing quality health care delivery and maternity services utilization. Knowledge on women's satisfaction will be one of the important steps towards solving maternal and child health problems faced in Swaziland. The aim of the study was to determine maternity experiences and women's demographic characteristics that affect perceived satisfaction with maternity care at a regional hospital in Swaziland. A cross sectional survey using structured interview questionnaire was used to obtain data from 198 women who had a normal childbirth during their postnatal hospital stay. One-way ANOVA and t-test were used to examine association between variables and stepwise multiple linear regression analysis was conducted to identify predictors of satisfaction. The final model indicated that respecting women's description of pain/discomfort, staff kindness, gender of birth assistant, never being alone during labor and woman's education level determined satisfaction with maternity experience, explaining 44.6% of the variation in maternity satisfaction ($F = 30.932$, $p < .001$). The study findings show the importance of provider related factors (interpersonal aspect of care, gender of provider) and consideration of woman's education on satisfaction with care during intrapartum and postpartum. (*Afr J Reprod Health* 2021; 25[3]: 94-104).

Keywords: Women's satisfaction, maternity care experience, Swaziland

Résumé

Les soins cliniques pendant le travail et l'accouchement sont importants, mais la compréhension des préférences et des expériences des femmes est devenue plus importante pour évaluer la qualité de la prestation des soins de santé et l'utilisation des services de maternité. La connaissance de la satisfaction des femmes sera l'une des étapes importantes vers la résolution des problèmes de santé maternelle et infantile rencontrés au Swaziland. L'objectif de l'étude était de déterminer les expériences de maternité et les caractéristiques démographiques des femmes qui affectent la satisfaction perçue à l'égard des soins de maternité dans un hôpital régional du Swaziland. Une enquête transversale utilisant un questionnaire d'entretien structuré a été utilisée pour obtenir des données de 198 femmes qui ont eu un accouchement normal pendant leur séjour à l'hôpital postnatal. Une ANOVA à un facteur et un test t ont été utilisés pour examiner l'association entre les variables et une analyse de régression linéaire multiple par étapes a été menée pour identifier les prédicteurs de la satisfaction. Le modèle final a indiqué que le respect de la description de la douleur/de l'inconfort par les femmes, la gentillesse du personnel, le sexe de l'assistante d'accouchement, le fait de ne jamais être seule pendant le travail et le niveau d'éducation de la femme déterminaient la satisfaction à l'égard de l'expérience de la maternité, expliquant 44,6 % de la variation de la satisfaction de la maternité ($p < .001$). Les résultats de l'étude montrent l'importance des facteurs liés au prestataire (aspect interpersonnel des soins, sexe du prestataire) et la prise en compte de l'éducation de la femme sur la satisfaction des soins pendant l'intrapartum et le post-partum. (*Afr J Reprod Health* 2021; 25[3]: 94-104).

Mots-clés: Satisfaction des femmes, expérience des soins de maternité, Swaziland

Introduction

Patient satisfaction is increasingly playing an important role in quality of care reforms and health care delivery. Even though a lot of research has been conducted to understand patient satisfaction with health care experience, there is still lack of a universally accepted definition or measure for

patient satisfaction^{1,2}, as this is an abstract concept involving rating and evaluation of health care services based on attitude formed by a patient about a clinical experience. Satisfaction with maternity care is a reflection of the women's judgment of different domains of maternity care, including technical, interpersonal, and organizational aspects^{2,4}. Due to its subjective nature, a positive

patient satisfaction is not self-sufficient to establish effectiveness or accessibility of services, it should be accompanied by objective process evaluations⁵. Despite the growing research interest on satisfaction with childbirth care, there are only a small number of validated instruments of satisfaction with care during labor and birth⁶.

To meet MDGs 4 and 5 targets by 2015, the government of Swaziland had implemented various programs directed towards improving maternal and child health outcomes, such as reducing geographical and financial barriers to maternity services by providing childbirth services at a low cost in public hospitals. Despite the fact that antenatal care attendance improved to 97% and about 74.1% of childbirths occur in health facilities⁷, Swaziland has not made significant progress towards achieving MDGs 4 and 5 as high maternal and infant mortality rate continues to be a major problem⁸. The Swaziland demographic and health survey (SDHS) conducted 2006-2007 revealed that women with high parity tend to have more births at home as 14% first births occurred at home, while 25% of second births, and 31% of forth and firth births occurred at home⁹. The increasing prevalence of home births without skilled professional assistance is a cause for concern in the country, therefore it is vital that the experiences and satisfaction of women who recently used maternity services be explored. This may bring understanding to current maternity service seeking behavior among Swazi women and help identify elements of care that cause dissatisfaction.

Literature provides differing views about the effects of women's demographic characteristics on satisfaction with maternity care. Previous research has found that socio demographic characteristics of women determine satisfaction with intrapartum and postpartum care¹⁰⁻¹¹; weak or no association of demographic characteristics on satisfaction has been reported¹²⁻¹³, making further research in this area inevitable. Aldna *et al*, stressed that the most powerful predictor of satisfaction in public hospitals was behavior especially respect and politeness of health care providers¹⁴. This means that provision of maternity care must not focus only on the medical needs of the mother and baby, but also include the social needs, such as maintenance of good communication with mothers and respectful care¹⁵⁻¹⁸, as well as supporting informed choices in birth as possible^{2,12,19,20}. Patient

involvement in childbirth decisions have a positive effect for mother and baby as it results in adherence to treatment plan, improved clinical outcomes and increase responsibility of self and baby.

This study assessed women's satisfaction with maternity care during labour and childbirth, and postnatal hospital stay by answering the following question:

1. Is there a relationship between women's socio-demographic characteristics and satisfaction with maternity care?
2. Is there a relationship between maternity experiences and women's satisfaction?

Knowledge of women satisfaction with maternity care in Swaziland will provide useful information to midwives and other health care professionals involved in caring for maternity women as such provide acceptable services to promote utilization of services for childbirth.

Methods

A cross sectional survey using structured interview questionnaire was used to collect data from a convenient sample of women admitted at a public hospital following birth in the same institution. Purposive selection of a regional hospital which conducts the highest number of births each year was done based on ministry of health statistics indicating that this hospital conducts more than 30% of all births in Swaziland²¹. The inclusion criteria were having given birth by normal vaginal delivery; understood Siswati or English language and consenting to be part of the study. Exclusion criteria were delivery by emergency cesarean section, having a stillbirth, preterm and sick babies who required special neonatal care. These mothers were excluded because their experiences may greatly influence their attitudes towards care received.

To contact as many women as possible within a short period of time data was collected while women were in the hospital post-natal unit before they were discharged. In Swaziland public hospitals, women are observed for an average of 24 hours after childbirth and home discharges are done once a day. Data collection was done daily from 9 August to 31 August 2013, 201 potential participants were approached and 198 consented to

be part of the study. Reason for not participating was not requested.

Permission to conduct the study was granted by scientific and ethical committee (SEC) of the Ministry of Health (Swaziland) and the Hospital administration where data was collected. The hospital administration responded with a letter, of which a copy of the letter was placed at the nurses' station in postnatal ward for staff to know and assist in every possible way to allow uninterrupted interviews with respondents. Participation in the study was voluntary; verbal and written informed consent was obtained before initiating interview and it was explained to potential participants that they were free to participate, and their privacy was guaranteed.

Measures

A validated questionnaire; the survey of Bangladeshi women's experience of maternity services (SBWEMS) by Duff *et al*²², was used to measure the variables under study. In their study to evaluate satisfaction with maternity care in Sylheti speaking Bangladeshi women, Duff *et al.* reported excellent reliability measures of the subscales, with Cronbach's alphas of .91 for the antenatal subscale, .76 for the perinatal scale, .81 for the postnatal subscale, and .91 for the overall or total items (72 items). Test retest reliability was .70 and content validity was assessed by professors and women during development of the questionnaire²². In this study, no major modifications were made to the original questionnaire; only questions that were not applicable in the Swazi maternity setting were removed, in order to adapt the questionnaire to make it suitable for the sample under study. An experienced midwife was consulted and Taipei Medical University (TMU) professors also approved the tool. For the purpose of this research, the antenatal scale was removed; focus was on the care during labour and childbirth and postnatal care while in hospital. Cronbach's alpha .736 was obtained for labour and birth scale, and .588 for postnatal scale. There were 3 open ended questions which asked the respondents to give an example of care which was good or poor while they were in hospital and to give a suggestion on how to improve the care to make them feel more satisfied.

Variables

Dependent variable: Satisfaction score was computed using 4 global satisfaction questions to form an overall satisfaction score (perceived satisfaction) for each participant. Respondents were required to rate satisfaction on scale of 1 to 4, where 1 was very satisfied and 4 was very dissatisfied. Reverse coding was done then responses to the four satisfaction questions were aggregated into an overall maternity satisfaction score. The highest possible satisfaction score was 16 and the lowest possible satisfaction score was 4.

Independent variables: consisted of demographic characteristics, labour and birth care experiences and postnatal care experiences.

Data collection and analysis process

The questionnaire was tested for legibility and comprehensibility in 10 women and this resulted in minor changes in wording of some questions before main study data collection was done. Data was analyzed using IBM SPSS version 18.0 Descriptive statistics, One-way ANOVA and t-test were used to examine effects of variables on satisfaction. Stepwise multiple linear regression analysis was conducted in order to identify factors that predicted women's satisfaction with maternity care. An alpha level of .05 was used for all statistical tests. Open ended responses were categorized into themes and frequencies were used to summarize the findings.

Results

Characteristics of the sample

The average duration of pregnancy was 38 weeks at delivery. Women had a mean age of 25.11 years (SD, 5.514 years) with a majority having up to high school education 70.7% (n = 140). Most respondents were multiparous (65.7%, n = 130), and 54.5%, (n=108) were single, 33.8% (n=64) were married and 11.6% (n=23) were cohabiting. More than three quarters of the respondents, 75.3% (n= 149) were unemployed, while the employment status for their partners showed an opposite trend as 64.6% (n=128) reported their partners were employed. A large proportion of the mothers lived in rural areas (68.1%, n = 136) and all except one, of the respondents were Christians.

Table 1: Socio demographic characteristics of participants

Variable	N	Mean	SD	F/t	P
Education level				1.462	.201
None or preschool	6	15.000	1.265		
Primary school	40	14.600	1.865		
High school	140	13.914	2.353		
Tertiary	12	13.667	2.146		
Parity				-.522	.465
Primipara	68	13.956	2.161		
Multipara	130	14.131	2.280		
Marital status				1.530	.219
Single	108	13.935	2.189		
Married	67	14.030	2.412		
Cohabiting	23	14.826	1.825		
Living arrangement				1.170	.325
Alone	14	13.143	2.070		
Partner	73	14.288	2.389		
Parents	70	13.942	2.334		
In-laws	16	13.750	2.324		
Other	25	14.520	1.262		
Employment status				3.928	.021*
Employed	40	13.325	2.515		
Unemployed	149	14.322	2.064		
Self employed	9	13.222	3.948		
Income/month[#]				1.335	.258
<E1000	32	14.406	1.982		
E1000-E5999	71	13.916	2.534		
E6000+	13	12.923	2.957		
Unemployed	47	14.149	1.876		
Don't know	35	14.400	1.882		
Residence				.917	.360
Rural	136	14.169	2.138		
Urban	62	13.855	2.442		

1 USD = 14.39

*P < .05

Labour and birth experiences

All births were conducted by midwives and student midwives, yet 10.1% (n=20) of respondents did not know whether the health care provider who assisted them was a Doctor, Midwife or student midwife. Of all the births conducted, 92.2% (n =194) birth assistants were conducted by females' midwives, 83.3% (n = 165) of women were satisfied with the birth assistant. All respondent did not get an opportunity to choose; birth assistant professional, gender of birth assistant and a person of their choice to keep company during labour and birth. More than half of the participants said they would not like to have company of partner or relatives. During labour and birth, a majority of respondents were given enough explanation of what was happening (74.2%); 52.5% of the women reported that their description of discomfort was respected by midwives most of the time; had the right number of staff around (67.3%); doctor/ midwives spent

enough time with them (82.8%) and were never left alone by staff at a time when it worried them to be alone (82.8%). Most of the mothers were not aware of any other birth position as 88.4 % (n = 175) of respondents did not know any other birth position besides the one they used. Slightly above half of the respondents 52% (n= 103) rated labour ward staff as very kind and understanding, 38.9% (n = 77) said staff were kind and understanding and 9.1% (n = 18) said providers were not very kind and understanding.

Postnatal experiences

Like intrapartum care, choice was limited only to baby feeding method where all women autonomously chose the feeding method. Most of the women were breastfeeding their babies (91.4% (n=181) and the rest 8.6% (18) gave formula feed. Most women were given enough advice and help on baby feeding (90.9%), baby care (90.4%), monitoring baby health (93.9%) and their own

Table 2: Perceived satisfaction by labour and child birth experience

Variables	N	Mean	SD	F/t	P
Birth Assistant				.108	.897
Midwife	147	14.109	2.240		
Student	31	13.903	2.055		
Don't know	20	14.050	2.564		
Respect description of discomfort/pain				42.126	.000***
Not really	26	11.269	2.031		
Sometimes	68	13.750	2.119		
Mostly	104	14.981	1.660		
Staff around during labour and delivery				.499	.608
Too few	38	14.000	2.371		
Right number	133	14.165	2.104		
Too many	27	13.704	2.686		
Doctors/midwives spent enough time with you				14.147	.000***
No, often too busy	8	11.000	2.726		
No, sometimes busy	26	12.962	2.107		
Yes	164	14.396	2.068		
Staff kindness and understanding				46.272	.000***
Not very kind and understanding	18	10.278	2.696		
Fairly kind and understanding	77	13.961	1.874		
Very kind and understanding	103	14.816	1.649		
Gender of birth assistant				-3.169	.002**
Male	14	12.286	2.286		
Female	184	14.207	2.367		
Met any of the midwife before				.535	.593
Yes	5	14.600	2.074		
No	193	14.057	2.243		
Explain what was happening				2.607	.011*
Explained enough	147	14.340	2.035		
Did not explain enough	51	13.294	2.602		
Choice to move				1.226	.694
Yes	178	14.124	2.233		
No	18	13.444	2.307		
Were you left alone by staff				4.977	.000***
No	164	14.481	1.901		
Yes	34	12.088	2.667		

* $P < .05$. ** $P < .01$. *** $P < .001$

health and recovery (94.9%). All women received consistent advice from staff during their hospital stay; 93.9% (n=186) said they always understood professional advice given to them, while 6.1% (n=12) said they sometimes understood. Most of the mothers (90.9%) stated that health providers spent enough time with them during postnatal hospital stay. A small fraction did not get enough assistance with their personal needs (2.5%) and with needs of the baby such as bathing or feeding from the staff (9.1%). Generally postnatal ward staff were very kind /fairly kind and understanding with only 2% (n=4) rating the staff as not very kind and understanding. Most of the mothers (71.2%),

stayed between 1-2days in hospital after delivery, and 83.3% were happy with the length stayed.

Perceived satisfaction by respondent's characteristics

Among demographic characteristics, only employment status of participants ($F = 3.928$, $p = .021$) was significantly associated with satisfaction. Parity ($t = -.522$, $p = .465$), education level ($F = 1.462$, $p = .201$), income ($F = 1.335$, $p = .258$), marital status ($F = 1.530$, $p = .558$), and residence ($t = .917$, $p = .360$) did not have a statistically significant association with satisfaction. There was

Table 3: Perceived satisfaction by postnatal care experience

Variables	N	Mean	SD	F/t	P
Advice and help on baby feeding				2.611	.010*
Enough	180	14.200	2.183		
Not Enough	18	12.778	2.415		
Advice and help on how to handle, settle and look after the baby				.684	.495
Enough	179	14.106	2.262		
Not enough	19	13.737	1.996		
Advice and help on baby's health, progress and any problems				1.180	.240
Enough	186	14.118	2.190		
Not enough	12	13.333	2.871		
Advice and help on own health and recovery after birth				-.767	.444
Enough	188	14.043	2.268		
Not enough	10	14.600	1.506		
Understanding of advices given after delivery				3.971	.048*
Sometimes understood	12	12.833	3.040		
Always understood	186	14.151	2.161		
Doctors/midwives spend enough time with you				1.153	.318
No often too busy	2	15.000	1.414		
No sometimes busy	16	13.313	2.915		
Yes	180	14.128	2.172		
Help with own need				-.941	.348
Enough	193	14.047	2.255		
Not enough	5	15.000	1.000		
Help with baby needs				1.137	.257
Enough	180	14.128	2.267		
Not enough	18	13.500	1.855		
Staff kindness and understanding				2.237	.110
Not very kind and understanding	4	12.500	1.732		
Fairly kind and understanding	69	13.768	2.059		
Very kind and understanding	125	14.288	2.317		
Variable	N	Mean	SD	F/t	P
Visiting times				.630	.534
Happy with visiting times	160	14.019	2.327		
Would like different	18	13.944	1.830		
Don't know	20	14.600	1.789		
Length of hospital stay				.070	.933
Less than 24 hours	54	14.130	2.323		
1-2 days	141	14.057	2.219		
3-4 days	3	13.667	2.0817		
Perceived length stayed				2.687	.071
Happy with length stayed	165	14.224	2.226		
Discharged soon	7	12.714	2.928		
Stayed too long	26	13.462	1.944		

* $P < .05$

no statistically significant association between age and satisfaction ($r = .034$, $p = .635$).

Perceived satisfaction by maternity care experiences

During labour and birth, respecting woman's description of discomfort or pain ($F = 42.126$, $p <$

.001); and time spent with woman ($F = 14.147$, $p < .001$) had a significant effect on satisfaction. Women who were assisted by a female midwife during childbirth, were significantly more satisfied than those who were assisted by males, $t = -3.169$, $p = .002$. Women who received explanation about what was happening ($t = 2.607$, $p = .011$), and those who were never left alone at a time when it worried

Table 4: Stepwise multiple linear regression analysis: predictors of perceived maternity satisfaction

Variable	Model 1			Model2			Model3			Model4			Model 5		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Constant	10.032	.474		8.306	.546		5.445	1.055		7.184	1.202		8.575	1.374	
Respect	1.687	.190	.536	1.241	.196	.394	1.129	.195	.394	1.009	.196	.320	1.024	.194	.323
Staff kindness				1.150	.212	.337	1.219	.209	.357	1.009	.218	.296	.967	.217	.283
Birth assistant gender (Ref Male)							1.535	.488	.176	1.683	.482	.193	1.617	.479	.186
Ever left alone (Ref Never left alone)										-.1045	.367	-.177	-1.066	.364	-.180
Education													-.419	.203	-.110
R ²	.287			.380			.410			.434			.446		
Adjusted R ²	.283			.374			.401			.422			.432		
F change	78.843***			29.396***			9.888**			8.131**			4.147*		
F	78.843***			59.831***			45.001***			37.024***			30.932***		

*p < .05 **p < .01 ***p < .001

them to be alone ($t = 4.977$, $p < .001$) were significantly more satisfied with maternity care.

In postnatal care, women who said they received enough advice and help on baby feeding were significantly more satisfied than those who said advice and help on baby feeding was not enough ($t = 2.611$, $p = .010$). Women who always understood professional advice were significantly more satisfied ($t = 3.971$, $p = .048$). Perceived length of hospital stay approached borderline significance but was not significantly associated to satisfaction ($p = .071$). Time spent by doctors/midwives with the woman ($p = .318$), staff kindness and understanding ($p = .110$), and visiting times ($p = .534$) did not have significant mean differences.

Stepwise multiple linear regression results

The final model to predict perceived satisfaction with care indicated that; respect of woman's description of discomfort/pain, staff kindness and understanding, gender of birth assistant, never being left alone and level of education were significant predictors of satisfaction with maternity care ($F = 30.932$, $p < .001$), and they explained a significant proportion of 46.6% variation in satisfaction.

Discussion

The women's answers showed that all women were assisted by midwives/student midwives especially female midwives during childbirth, with only 7% of the respondents stating that they were assisted by males' student midwives. This mirrors the actual practice in public health hospitals where midwives are the key providers of maternity care⁷. The study also revealed that choice during labour and birth is limited to certain aspects of care during intrapartum and postnatal period, such as choice for infant feeding method, which is a common practice in public health facilities of Swaziland. Contrary to studies conducted in the developed regions where women seek more control and participation in decision making during birth²³, this concept is relatively new among Swazi women.

Respondents were more satisfied with postnatal care compared to intrapartum care, which is contrary to the findings by Waldenstrom *et al*¹⁰, who found that women were more satisfied with intrapartum care. Possible explanations for getting higher satisfaction rating in postnatal care

compared to intrapartum care observed in this study were drawn from the themes that emerged from open ended responses where mothers were asked to give an example of care that was good and poor while in the hospital. In order of importance women felt care was poor when staff exhibited an uncaring attitude (rude, impatience, physical abuse (slapping) and verbal abuse (shouted at), staff did not always listen to what they said and discomfort due to lack of comfortable temporal lodging area during the early stages of labour. These complaints are quite common in public hospitals around Swaziland. Lack of infrastructure also contributed to lower satisfaction during intrapartum period, due to the limited space available in the labour ward, women are only admitted and given a bed when they are in active stage of labour hence women who come early to the hospital labour outside or in waiting huts unsupervised for long periods. On the other hand, mothers said that care was good when the staff were approachable, respectful and skillful; the hospital environment was clean, health education was given, and warm bathing water and food was provided. It is known that experiences of unsatisfactory treatment in hospitals influence women's practices in a negative way¹⁷⁻¹⁸. The findings suggest that women's experience of care relates not only to the quality and appropriateness of care she receives but also to her impression of provider attitude and facility infrastructure. Gungor and Beji support that women's perceptions of birth experience are associated with many personal and institutional factors²⁰, such as provision of care or clinical or technical aspect, experience of care which encompass women's perspectives and interaction with providers²⁴.

Demographic characteristics of respondents in this study did not have a significant effect on satisfaction, these findings are like Hodnett's who also found that demographic characteristics of women had little influence on satisfaction¹². Consistent with literature²⁵⁻²⁶ we found that during labour and birth, patient-provider interaction, and provider attitude had a very important effect on satisfaction during intrapartum care. Respecting women's description of discomfort and pain increased satisfaction with care, doctors/ midwives spending enough time with woman, as well as staff kindness and understanding were strongly associated with higher satisfaction. The study also found that 74% of women given

enough explanation about what was happening in labour and birth were significantly more satisfied, such findings suggest that, even though choice is limited, a majority of women were informed about what was happening to them and why. These findings support that interpersonal process is the vehicle by which technical care is implemented and on which its success depends²⁴.

In Swaziland's public hospitals, women in labour are not permitted to have company by a person of their choice due to the setup of labour and delivery rooms which provides limited privacy, hence only women in labour are allowed inside. More than half of the women said they would not like company in labour, while 17.2% felt isolated either during labour or immediately after childbirth at a time when it worried them to be alone and they were significantly less satisfied. Women who were delivered by female midwives were significantly more satisfied, and the gender of birth attendant was a significant predictor satisfaction in the final model. These findings indicate that there is a need for further research on women's preference on gender of care providers in labour and birth. However, of note is that all male providers were student midwives and were working under the supervision of female ward midwives, therefore, further research needs to be done to compare qualified male midwives and female midwives in the Swaziland. Shafiei *et al.* found that immigrant women in Australia had cultural preferences for female providers in maternity care²⁵.

During postnatal hospital stay, women who said they received enough advice and help on baby feeding and always understood professional advice given to them in postnatal care were significantly more satisfied. These findings confirm that the needs for individual woman differ between intrapartum and postpartum care²³, unlike during labour and childbirth where time spent with woman, staff kindness and understanding had significant effects on satisfaction, in the post-natal hospital stay these did not have any significant effect on women satisfaction, instead provision of advice and assistance with baby feeding, and understanding advice were significant. This means that in post-natal period, mothers are concerned with newborn feeding and wellbeing as women who received enough advice and understood them on baby feeding and care were significantly more satisfied with maternity care.

Predictors of perceived satisfaction with maternity care

The findings showed that; women's level of education, respect of woman's description of pain and discomfort, staff kindness and understanding, gender of birth assistant and not being left alone during labour significantly predicted overall satisfaction and they explained 44.6 % of the variation in satisfaction. The rest of the variation may be explained by factors not included in this study; such as patient expectation, self-reported health, and portrayal of the health system by media, political leaders and public figures as they are said to influence how patients perceive the health system¹³. Contrary to the findings by Waldenstrom *et al.* where low level of education was associated with not being satisfied¹⁰, we found that education was negatively associated with satisfaction. The reason for this finding maybe that; if consistent care was provided to all women regardless of education level, less educated women are easily satisfied than their educated counterparts who are ready to criticize the care they received. Even though in bivariate analysis, employment status was significantly associated with satisfaction, it did not predict satisfaction. The findings that intrapartum care experiences had more influence in prediction of maternity satisfaction are in agreement with previous research^{12,25,26}. This study discovered that respecting woman's description of discomfort/pain accounted for 28.7% variation in satisfaction, and when staff kindness was included the model improved to predict 38.0% of the variation. The findings from this study agree with literature, that the most powerful predictor of satisfaction in public hospitals was behavior especially respect and politeness^{12,14}.

Conclusion

The study results demonstrate a key role of provider attitudes and behavior on women satisfaction, therefore improvement in communication skills need to be fostered as well as improvement in the hospital infrastructure, by providing an environment that will put women at ease during labour and child birth. Health providers should be sensitized on the findings that showing an uncaring attitude is associated with lower satisfaction. Attention should be given to the communication

skills with women seeking childbirth services, because even if maternity care meets all the medical needs of the mother and baby but fail to meet the social and emotional needs, it results in dissatisfaction. As a result, maternal health programs should focus on improving patient/provider relationship to improve satisfaction and health seeking behavior among Swazi women as this is expected to reduce the number of homebirths triggered by dissatisfaction with hospital based maternity experiences.

Competing interests

Authors declare that they have no competing interests.

Authors' contributions

Authors contributed equally to this work, ZZT did the literature review, collected and analyzed data interpreted the results and drafted the manuscript. NWK supervised the research. Both authors read and approved the final manuscript.

Acknowledgements

The authors express the sincere appreciation to the respondents, the maternity department at Raleigh Fitkin Memorial hospital, Swaziland Ministry of health Scientific and Ethics Committee and Taipei Medical University for the support to the successful completion of the study. Sincere appreciation to Taiwan International Cooperation and Development (ICDF) for providing scholarship.

References

- Christiaens W and Bracke P. Assessment of social psychological determinants of satisfaction with childbirth in cross-national perspective. *BMC Pregnancy and childbirth*, 2007; **7**(1):1-12.
- Jackson JL, Chamberlin J and Kroenke K. Predictors of patient satisfaction. *Social Science and Medicine* 2001; **52**(4): 609-620
- Ross-Davie CM, Cheyne H and Niven C. Niven. Measuring the quality and quantity of professional intrapartum support: testing a computerised systematic observation tool in the clinical setting. *BMC pregnancy and childbirth*, 2013; **13**(1): 1-12.
- Matejic B, Milicevic M S, Vasic and Djikanovic B. Maternal satisfaction with organized perinatal care in Serbian public hospitals. *BMC pregnancy and childbirth*, 2014; **14**(1): 1-9.
- World Health Organization, Client satisfaction evaluations, World Health Organization, 2000: Geneva. Retrieved January 28, 2013 from www.emcdda.europa.eu/.../att_5868_EN_6_client_satisfaction_evaluation
- Sawyer A, Ayers S, Abbott J, Gyte A, Rabe H and Duley A. Measures of satisfaction with care during labour and birth: a comparative review. *BMC pregnancy and childbirth*, 2013; **13**(1):1-10.
- Government of Swaziland, Multiple Indicator Cluster Survey (MICS): Monitoring the situation of children, women and men. 2010: Mbabane
- UNICEF, Levels and trends of child mortality. 2012: New York. Retrieved 3 February 2013 from http://www.unicef.org/videoaudio/PDFs/UNICEF_2012_child_mortality_for_web_0904.pdf
- Central Statistical Office (CSO) [Swaziland] and Macro International Inc., Swaziland Demographic and Health Survey. 2006-07 Mbabane.
- Waldenstrom U, Rudman A and Hildingsson I. Intrapartum and postpartum care in Sweden: women's opinions and risk factors for not being satisfied. *Acta obstetrica et gynecologica Scandinavica*, 2006; **85**(5): 551-560.
- Sitzia J. and Wood N. Patient satisfaction: A review of issues and concepts. *Social science & medicine*, 1997; **45**(12):1829-1843.
- Hodnett ED. Pain and women's satisfaction with the experience of childbirth: a systematic review. *American journal of obstetrics and gynecology*, 2002; **186**(5): S160-S172.
- Bleich SN, Ozaltin E and Murray CJL. How does satisfaction with the health-care system relate to patient experience? *Bulletin of the World Health Organization*, 2009; **87**: 271-278.
- Aldana JM, Piechulek H and Al-Sabir A.. Client satisfaction and quality of health care in rural Bangladesh. *Bulletin of the World Health Organization*, 2001; **79**: 512-517.
- Ith P, Dawson A and Homer C. Women's perspective of maternity care in Cambodia. *Women and Birth*, 2013; **26**(1): 71-75.
- Alrubaiee L and Alaa'ida F. The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality-patient trust relationship. *International Journal of Marketing Studies*, 2011; **3**(1): 103.
- Miller S, Cordero M, Coleman AL, Figueroa J, Brito-Anderson S, Dabagh R, Calderon V, Caceres F, Fernandez A J and Nunez M. Averting maternal death and disability Quality of care in institutionalized deliveries: the paradox of the Dominican Republic. *International Journal of Gynecology & Obstetrics*, 2003; **82**(1): 89-103.
- Bjertnaes OA and Iversen HH. User-experience surveys with maternity services: a randomized comparison of two data collection models. *International Journal for Quality in Health Care*, 2012; **24**(4): 433-438.
- Goldberg H. Informed decision making in maternity care. *The Journal of perinatal education*, 2009; **18**(1): 32-40.
- Gungor I and Beji NK. Development and psychometric

- testing of the scales for measuring maternal satisfaction in normal and caesarean birth. *Midwifery*, 2012; 28(3):348-357.
21. Government of Swaziland, Improving the Quality of Maternal and Neonatal Health Services in Swaziland: A Situational Analysis, 2011. Ministry of health, Mbabane.
 22. Duff L, Lamping DL and Ahmed LB. Evaluating satisfaction with maternity care in women from minority ethnic communities: development and validation of a Sylheti questionnaire. *International Journal for Quality in Health Care*, 2001;13(3):215-230.
 23. Gamble J, Creedy DK, and Teakle B. Women's expectations of maternity services: a community-based survey. *Women and Birth*, 2007; 20(3):115-120.
 24. Hulton LA, Matthews Z and Stones RW. Applying a framework for assessing the quality of maternal health services in urban India. *Social science & medicine*, 2007; 64(10):2083-2095.
 25. Shafiei T, Small R and Mclachlan H. Women's views and experiences of maternity care: a study of immigrant Afghan women in Melbourne, Australia. *Midwifery*, 2012; 28(2): 198-203.
 26. Bazant ES and Koenig MA. Women's satisfaction with delivery care in Nairobi's informal settlements. *International Journal for Quality in Health Care*, 2009; 21(2):79-86.