

## ORIGINAL RESEARCH ARTICLE

# Satisfaction Determinants of Women during Childbirth in Health Facilities in Senegal: Literature Review

Thierno Souleymane Ball Anne<sup>1, 3\*</sup>, Massamba Diouf<sup>2</sup>, Ibrahima Seck<sup>3</sup> and Anta Tal Dia<sup>3</sup>

IntraHealth International, Bureau Sénégal<sup>1</sup>; Département Odontologie/Faculté de Médecine, de Pharmacie et d'Odontologie / Université Cheikh Anta Diop de Dakar<sup>2</sup>; Service de Santé Publique/Institut de Santé Et de Développement / Faculté de Médecine, de Pharmacie et d'Odontologie / Université Cheikh Anta Diop de Dakar<sup>3</sup>

\*For Correspondence: E-mail: [tanne@intrahealth.org](mailto:tanne@intrahealth.org); Phone: +221 77 534 06 85

## Abstract

This article presents the results of the literature review performed on the main conceptual models used in the measurement of the satisfaction of women during childbirth in health facilities and the main determinants of their satisfaction. The review focused on PubMed, Google scholar and Public Health data. Several conceptual models for measuring satisfaction were found through the literature. It is clear from this review that a multitude of determinants are associated with women's satisfaction such as health care provider's attitude, the environment as well as the socio-demographic, economic and even psychological characteristics of the patient herself. These results were used to develop a conceptual framework for measuring the satisfaction of women who gave birth in Senegal health facilities. (*Afr J Reprod Health* 2017; 21[1]: 93-98).

---

**Keywords:** satisfaction, childbirth, satisfaction levels, satisfaction determinants

---

## Résumé

Cet article présente les résultats du bilan de la documentation réalisée sur les principaux modèles conceptuels utilisés pour mesurer la satisfaction des femmes pendant l'accouchement dans les établissements de santé et les principaux déterminants de leur satisfaction. L'évaluation a mis l'accent sur les données recueillies de PubMed, Google Scholar et de Santé Publique. Plusieurs modèles conceptuels pour mesurer la satisfaction ont été trouvés dans la documentation. Il ressort clairement de cette étude qu'une multitude de déterminants sont associés à la satisfaction des femmes, telles que l'attitude du fournisseur de soins de santé, l'environnement ainsi que les caractéristiques socio-démographiques, économiques et même psychologiques de la patiente elle-même. Ces résultats ont été utilisés pour élaborer un cadre conceptuel pour mesurer la satisfaction des femmes qui ont accouché dans les établissements de santé du Sénégal. (*Afr J Reprod Health* 2017; 21[1]: 93-98).

---

**Mots-clés:** satisfaction, accouchement, niveaux de satisfaction, déterminants de la satisfaction

---

## Introduction

More than twenty years after the United Nations' International Conference on Population and Development (ICPD), the issues related to reproductive health, in Africa, continue to be a major public health challenge especially among the population living in the south of Sahara. The World Health Organization (WHO), in its global report "World Health 2012" points out that maternal mortality rate in Africa averages 620 deaths per 100 000 live births<sup>1</sup>. The risk, of dying of complications related to pregnancy and childbirth, in countries in the south of the Sahara is 300 times higher than that of a woman living in an

industrialized country. The direct obstetrical complications are among main causes of the maternal deaths worldwide (about 80% according to WHO). Moreover, the fact that internal bleeding is the first direct cause of maternal deaths highlights the importance of having qualified personnel during childbirth<sup>2</sup>. In Senegal, despite an obvious political interest and the implementation of relevant strategies put in place in that effect. Furthermore, according to the demographic and health survey report covering the period (2010-2011), nearly a quarter (23%) of women who gave birth in health facilities did not benefit from postnatal services<sup>3</sup>. This is disturbing if we refer to the importance of this period in the lives of the

dyad mother-and- child. This situation is all the more worrying since very few of the 77% of mothers have completed the three visits required.

The literature reveals that several determinants have been identified in Senegal, as factors limiting women's access to health facilities and hence to trained staff, either before, during or after childbirth. Among those factors, there is the relatively young age of the parturient, low rank of the pregnancy, low level of education, low income, geographic inaccessibility of health facilities and the unavailability of means of transportation<sup>4</sup>. It also appears that many taboos surrounding pregnancy and childbirth, often refrains pregnant women from requesting modern health care<sup>5</sup>.

Aside from these factors, the quality of health services offered by the caregivers is a parameter that is often taken into account in the analysis of the determinants that drive the use of obstetrical care. However, the models used to assess quality of services are often based of an objective assessment that uses explicit criteria or pre-established standards against which quality is compared (technical assessment). It is also important, to assess the quality of care, and to consider the level of client satisfaction (perceived quality). In fact, it is confirmed that satisfaction is strongly associated with health behaviors variable<sup>6</sup>. Thus, as part of a public health doctoral thesis, we are interested in measuring the effect of women's satisfaction level who gave birth in Senegalese health facilities and their subsequent behavior regarding postnatal services use (from delivery to D42).

This article aims to:

1. Review the main conceptual models used in the framework of the evaluation of the level of client satisfaction as a result of health services provided during childbirth and their main dimensions
2. Propose a conceptual framework to measure the effect of women's satisfaction on their subsequent behavior regarding postnatal services use.

## Methods

The literature review was done using edifying resources like PubMed database, Google scholar

and the Bank of Public Health data (BDSP). The main key terms used in effect of the framework are satisfaction; childbirth; dimensions and drivers of satisfaction. To conduct successful research, fifty one documents (articles, thesis, dissertations, reports, manuals) were found, 18 were selected and cited due to their direct correlation with the issues of childbirth, maternal morbidity-mortality, and predominantly client satisfaction related to childbirth. They were also found to be important determinants of satisfaction. The documents consulted date essentially from after 2003 except for the papers published by J. E. Jr Ware (1978) and Swan J. (1985 and 1994) on the theory of satisfaction.

The documents consulted allowed us to better understand the concept of satisfaction, and to be aware of the fine line between perceived quality and client satisfaction. Furthermore, the document allowed us to go through the different conceptual models used in the measurement of client satisfaction as well as dimensions and key determinants to client satisfaction. Table 1 summarizes the situation in terms of documents consulted and documents selected.

**Table 1:** Documents Flow Based on Type

Document type	Number of documents reviewed	Number of documents selected for references
Scientific articles	23	8
Books	8	3
Reports	14	4
Theses/Dissertations	6	3
<b>Total</b>	<b>51</b>	<b>18</b>

## Results

### *Conceptual models*

### *Definition of satisfaction*

Satisfaction is a concept originally borrowed from sociology and psychology theories. The very definition of user satisfaction concept is tricky. At this time, there is little consensus on the definition of this concept. By browsing through the literature on the issue, we are faced with a multitude of definitions proposals: (i) Satisfaction is the

mediator of consumer behavior post-purchase / consumption, (ii) Satisfaction is based on a comparison of the perceived performance of the service with a predetermined standard, (iii) Satisfaction is the result of a process of complex psychic comparisons. Comparing a theoretical value with an actual value: confirmation/invalidation paradigm, (iv) Satisfaction is the perceived competence of professionals by customers, the quality of information received, the continuity of services, including reception, accessibility, adequacy of resources and installations where they have received services and (v) Satisfaction is a psychological state arising from a purchase and /or consumption experience<sup>7,8</sup>.

Regardless the definition, we will recall that satisfaction is a value based judgment and results from the confrontation between perceived services and expected services and is made of specific three features. First it is subjective because it depends on the client's point of view, it is relative because it is related to the expectations of the client, and it is scalable because it is subject to change in the future.

Aside from the differences in the proposed definitions of the concept of satisfaction, it is also important to address the differences between perceived quality of service, and satisfaction. In fact, satisfaction is considered a dual response (involving emotional and cognitive phenomena) while the perceived assessment of quality is merely cognitive<sup>8</sup>.

### ***Satisfaction determinants***

It is clear from this review that the factors that govern satisfaction are the characteristics of a previous service experience. There are several factors that can be explored as part of the evaluation of customer satisfaction. These factors refer to courtesy, empathy, safety, cost, willingness, fairness, confidentiality, respect, competence of personnel, quality of information, service accessibility, clarity of procedures, timeliness of care, comfort in the interior of facilities, continuity of service, outcomes etc.

Beside these variables related to services, there are several socio-demographic features that have been considered as co-explanatory effects in

satisfaction. Consequently, they have been set aside for further consideration, since they were all significantly associated (either positively or negatively) to satisfaction<sup>9</sup>. Explicitly, these independent variables of services are: age, gender, marital status, ethnicity, level of education, occupation, and place of residence.

Additionally, it appears through the literature review, that the Health Locus of Control (LOC) or health center control is another variable that is considered a potential predictor of satisfaction. The LOC theory, articulated by Rotter in 1966, and supported by the work of Dubois questions a one's beliefs about one's own responsibility in the determination of one's health. The multidimensional is scale able to identify three types of beliefs: one "internal" type two "external" types.

Individuals with internal controls consider that the reinforcements they receive depend on their behaviors. This internal control is measured by a "sub-scale of internal health local control" (IHLC). External individuals may consider themselves to be under the influence of luck or fate this is the "sub-scale health local control chance" (CHLC) or action of third parties. This is "the sub-scale power health local control by others" (PHLC).

### ***Client's satisfaction measurement***

Drawn from these conceptual models, many apparatuses are offered as measurement tools for client satisfaction. As part of our review work, we have selected a few of them. These were chosen because they address precisely the assessment of client satisfaction in relation to service delivery in the domain of reproductive health and more specifically they point towards childbirth. The first tool selected is a validated French translation of the *Women's Views of Birth Labor Satisfaction Questionnaire Version 4* (WOMBLSQ 4 published in January 2010. This multidimensional questionnaire includes 30 items divided into several areas such as support from health workers, client expectations, assessment at home of the labor debut, first contact with newborn baby, support of the partner in the process of childbirth, the management of pain during and after birth, competence of the caregivers during childbirth,

physical environment, the control of work and situation and overall satisfaction.

The different items of the questionnaire are evaluated on the 7 levels scale of Likert type<sup>10</sup>.

The second is the *Evaluation of Care Satisfaction Questionnaire Obstetrics in Postpartum Instant* (SSOPPI). It is a multidimensional tool destined to measure satisfaction. It comprises 49 items on 5 theoretical areas, namely: (i) Nurse, (ii) Doctor, (iii) Anesthetists, (iv) Environment and (v) Overall satisfaction.

The first three areas have questions dealing with medical staff (availability, efficiency, trust, attention to the person, and information), the fourth deals with the physical environment (accessibility, comfort, and hygiene) and the fifth focuses on overall satisfaction (competence, effectiveness, and human qualities). The SSOPPI questionnaire has already been validated regarding its metric properties. This validation is part of a study conducted between September 2004 and January 2005 in health structures in three countries (Canada, France and Senegal). The study used a total sample of 432 patients (80 patients observed in Besançon, 101 observed in Grenoble, 77 in Montreal, 74 in Mont-Laurier Sainte-Agathe, Canada, and 100 in Dakar, Senegal). The SSOPPI questionnaire was administered to patients at least half an hour after delivery<sup>11</sup>. The results of the validation have globally shown excellent reliability regardless the domain concerned, since, computed Cronbach coefficients were respectively 0.941; 0.949; 0.808; 0.814 and 0.869 for the 5 dimensions<sup>12</sup>.

The third instrument found is a version of the readapted SSOPPI questionnaire that was validated in Burkina Faso as part of the study "*No effect of user fee exemption on Perceived quality of care delivery in Burkina Faso: a case-control study*"<sup>13</sup>. This version includes 34 items divided into three areas that are (i) interactions between patients and care providers (ii) quality of the physical environment of birth and deliverance and (iii) overall satisfaction.

As part of a study, another questionnaire was conceived in Senegal in 2003, by the AIDS 3 project. Its aim was to measure satisfaction faced to services deemed suitable to target-clients. It

came with 06 areas and was validated following a qualitative content analysis and an agreement-disagreement analysis using the Kappa test<sup>14</sup>. The 06 areas of the questionnaire are (i) reception and continuity, (ii) technical expertise, (iii) relational competency, (iv) information received, (v) accessibility and (vi) physical environment.

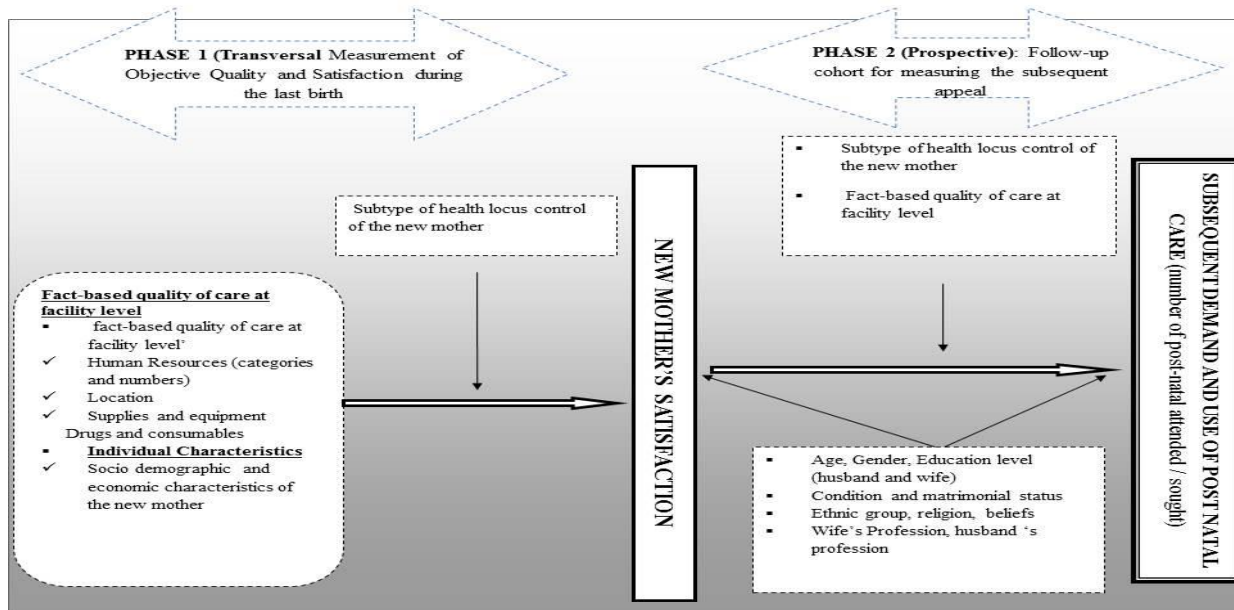
## Discussion

As part of this close examination of client satisfaction measurement, the conceptual distinction noted between *perceived quality* and *satisfaction* will be ignored. This is essentially due to two reasons: first, the work of Danaher and Mattsson sustained by regression analysis shows the existence of a positive relationship between *perceived value* and *satisfaction*. This shows the existence of a positive relationship between perceived quality and the concept of satisfaction itself. It suggests the existence of previous experience of perceived quality within client satisfaction for any specific service received<sup>15</sup>. This allegation is reinforced by the theory of expectations, which considers satisfaction as a gap that exists between the desired quality and the perceived one.

Then, the distinction between perceived quality and satisfaction is not relevant in considering the types of transactions. These two concepts ultimately merge in an overall assessment. This semantic clarification made, the review has put the emphasis on the most significant factors associated with patient satisfaction.

Another key element detected through the literature review, is the significant correlation between the assistance of the midwife and the satisfaction of the client. This correlation is strong both for the labor itself and for the overall supervision of the birth. So, independent from all other factors (obstetric or else), patient satisfaction increases with the availability of the midwife, her support and encouragement<sup>16</sup>.

Similarly, a few environmental variables are also consistently reported to be significantly associated with patient satisfaction. The most prominent of these factors being hygiene and privacy<sup>17</sup>. A few general factors such as the quality

**Appendix 1:** Conceptual Framework of the Study Locus.

of information received by patients<sup>16</sup>, the cost benefits are also often reported as closely associated with patient satisfaction.

Throughout the literature, in addition to these recurring evidence, it appears from the different conceptual models studied, that the quintessence of the main items are found in the three parts of the SSOPPI model questionnaire. These are: (i) the interaction between patients and care providers, (ii) the quality of the delivery environment and delivery and (iii) the general aspects of satisfaction. It is this very SSOPPI model, acclimatized, that will be used as part of this public health doctoral thesis on the theme: "Effect of women's satisfaction level who delivered in health facilities on their subsequent behavior regarding use of Post-natal services".

In this questionnaire model, LOC will be integrated and studied as potential interacting variable. According to the work of Chebab and Gharbi on the direct impact of regret on behavior through the effects of dissatisfaction show that the link between regret and dissatisfaction is even lower when the individual has an internal locus of control<sup>18</sup>. Swan Studies also show that people who have low level of expectation at the beginning of treatment or care may be the most satisfied<sup>19</sup>. These expectations themselves vary according to

culture and experience but mainly depend on the LOC.

## Conclusion

Finally, beyond the individual variables related to the patient (in this case the socio demographic determinants of health locus of control and economics), the conceptual model which will be retained in the analysis of the determinants of satisfaction will consider parameters related to the objective quality in health structures. It will more precisely analyze the categories and numbers and condition of available human resources, materials and equipment, drugs and other consumables required at the health facility. The data collected in this literature review on satisfaction have contributed significantly to the design of the overall conceptual framework. This work will be used as the basis of a prospective study of the influence of satisfaction of women who gave birth in health care structure on subsequent use of postnatal services (see Appendix 1)

## Authors' Contributions

All authors mentioned approved the manuscript. Thierno Souleymane Ball ANNE Conceived and designed the study, reviewed the relevant literature

and analyzed data. Massamba DIOUF contributes significantly to the drafting and analysis of the manuscript. Ibrahima SECK and Anta Tal DIA participated in the drafting and review of the manuscript.

## Acknowledgments

The authors of this publication have no financial interests or benefits arising from the application of the research presented in this publication.

## References

1. World Health Organisation. World Health Statistics. Geneva, 2012. 26 p
2. Tracking progress in maternal and child survival. The 2008 report. New York, UNICEF, 2007.
3. Ministry of Health and Medical Prevention, National Statistics and Demography Agency. Demographic and Health Survey (DHS-MICS), Dakar 2010-2011. 140 p.
4. Ndiaye P, Dia A T, Diédhiou A, Dièye E, Dione D A. Sociocultural determinants of the delay of the 1st prenatal consultation in a health district in Senegal. CAIRN.INFO 2005; 4(17): 535p
5. Gabrysch S, Campbell O MR. Still too far to walk: Literature review of the determinants of delivery service use. BMC Pregnancy and Childbirth 2009; 9(34):14p
6. Linder-Pelz S. Towards a theory of patient satisfaction. Social Science and Medicine. (1982) p577-579. Client satisfaction and measurement, available on: <http://www.digital-institute.org>, accessed September 22, 2014
7. Client satisfaction and measurement, available on: <http://www.digital-institute.org>, accessed September 22, 2014
8. Vanhamme J. Consumer satisfaction specific to a transaction: definition, history, measures and modes. Catholic University of Louvain; 7, 8, 20 p.
9. Ware J, Davies-Avery A. & Stewart A.L. The measurement and meaning of patient satisfaction: a review of recent literature. Health and Medical Care Services Review; (1978), 1(1): 1-15p.
10. Chauvin, J. Maternal satisfaction and mode of delivery. Thesis Paris-Decartes University, 2010, 6p
11. Shepens F, Dumont A, Riethmuller D, Schaal J-P, and Ramanah R. Final Report on the Immediate Postpartum Obstetric Care Study (SSOPPI). PHRC, 2009; Paris, France. p. 27.
12. Ramanah R, Dumont A, Schepens F, Traore G, Gaye A, Schaal JP, Riethmuller D et Rude N. Satisfaction of obstetric care: Development and validation of a quality scale of care, Gynecology, Obstetrics and Fertility. Elsevier Masson, p.477.
13. Philibert A, Ridde V, Bado A, Fournier P. No effect of user fee exemption on perceived quality of delivery care in Burkina Faso: a case-control study. BMC Health Services Research, 2013
14. Morin, D. Results of the validation phase of the Questionnaire Version-I, Project SIDA 3, (2003), Volet 6000 ; 1p.
15. Bowers M.R, Swan J & Koehler W.F. What attributes determine quality and satisfaction with health care delivery? Health Care Management Review; (1994), 19(4): 49-55p
16. Mendoza Aldana J, Piechulek H et Al-Sabir A. Patient satisfaction and quality of care in rural Bangladesh, Bulletin of the World Health Organization, (2001), 79 (6) : 512-517p.
17. Diouf M, Cissé D, Lo CMM, Faye D et Traoré R. Evaluation of the satisfaction of patients admitted to the odontology service in Dakar, CAIRN.INFO 2010; 3(41): 225-230 p.
18. Chebab S, Gharbi A. Consumer Regret: Moderators, Mediators and Consequences. 2009, 14p
19. Swan J. Deepening the understanding of hospital patient satisfaction: fulfilment and equity effects. Journal of Health Care Marketing. (1985), 5(31): 7-18p..