ADDIS ABABA UNIVERSIYTY COLLEGE OF HEALTH SCIENCE CENTRALIZED SCHOOL OF NURSING

A comparative study on nurses and midwives job satisfaction between functional and business processing re-engineering (BPR) method of organization in Hawassa university teaching hospitals, SNNPR, Ethiopia

A Thesis submitted to the School of Graduates Studies of Addis Ababa University College of Health Science In Partial Fulfillment of The Requirement for the Degree of Master Of Science in Maternity and Reproductive Health Nursing

By

Abdu Kassa Hassen (BSc)

May, 2011

Addis Ababa, Ethiopia

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APPROVED BY THE BOARD OF EXAMINERS

This thesis by Abdu Kassa is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of masters in maternity and reproductive health nursing.

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DECLARATION

I the undersigned, declare that "this thesis is my original work has not been presented for a degree in any other university and all sources of material used for the thesis have been acknowledged"

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This thesis work has been submitted for examination with my approval as university advisor.

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List of Acronyms

AA: Addis Ababa

AAU: Addis Ababa University

ANA: American Nurse Association

APA: American Psychiatric Association

BPR: Business processing re-engineering

ENA Ethiopian nurse association

FGD Focus group discussion

IRB: Institutional Review Board

HUTHs Hawassa university teaching hospitals

MOH: Ministry of Health

NDNQI: National Database of Nursing Quality Indicators

NHS: National health survey

WHO: World Health Organization

SNNPR: Southern Nation and Nationalities of Peoples Region

SPSS: Statistical Package for Social Science

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ABSTRACT

Background: Job satisfaction is the affective orientation that an employee has towards their work. What makes a job satisfying or unsatisfying does not depend only on the nature of the job, but also on the expectations that individuals have of what their job should provide.

Objectives: The main objective of this study is to compare levels of professional nurses and midwives job satisfaction and its determinants between functional and business processing re-engineering (BPR) method of organization in Hawassa university teaching hospitals, SNNPR, Ethiopia.

Methods: Institutional based cross- sectional descriptive data was collected by using self-administered questioners complimented by focus group discussions from 122 nurses and midwives full time workers who were randomly selected via simple random sampling technique.

Results: The analysis and interpretation of data was made using simple percentage count, mean score, and crude and adjusted odds ratio. Narrations of some qualitative data were also used. Concerning the findings of overall job satisfaction on both methods of organization almost half by half result were found, means the new method (BPR) couldn't bring a significant change on nurses and midwives job satisfaction. Also half of the respondents were planned to learn out of nursing science in the coming five years because of hate of organizational affiliation towards nurses. This may cause shortage of experienced nurses and midwives which is a global problem nowadays.

Conclusion: The study in this regard showed that a lot has to be done in the future to avert this situation. To this end, it should receive special managerial attention by finding out possible strategies, to strengthen predictors of intention to remain employed and upgrading their knowledge in nursing sciences, like employment practices that reflect moral integrity, incorporate clear communication systems, maximize employee involvement in decision-making, cohesive working relationships (cooperation with medical staff), appropriateness of the system for nursing, promote praise and recognition, and establish a shared vision and goals.

1 - INTRODUCTION

1.1. Background

Job satisfaction is the affective orientation that an employee has towards their work. What makes a job satisfying or unsatisfying does not depend only on the nature of the job, but also on the expectations that individuals have of what their job should provide (1). Satisfied employees tend to be more productive, creative, and committed to their employers. Recent studies have shown a direct correlation between staff satisfaction and patient satisfaction in health care organizations (2).

Job satisfaction is an important component of nurses' lives that can impact patient safety, staff morale, productivity and performance, quality of care, retention and turnover, commitment to the organization and the profession with additional replacement costs (e.g. agency staff) and further attempts to hire and orientate new staff(1). Nurse satisfaction is an important metric for nurse managers, because it has been shown to predict staff turnover and is associated with the quality of patient care and patient outcomes (3).

A number of variables have been found to be associated with greater hospital registered nurse (RN) job satisfaction, including individual characteristics such as younger age, shorter job tenure, increased organizational commitment and fewer hours worked(4). It is dynamic and can vary according to individual characteristics, expectations, style of management, changes to policy and individual lifestyle choices (1).

Most published research from various countries indicates that job satisfaction is a major predictor of nursing absenteeism, burnout, turnover and intention to quit (5). Understanding what

motivates workers and how this impact on performance has always interested organizations and managers and different theories have sought to answer this question (1).

Blegen synthesized findings from 48 studies and identified thirteen variables that were most strongly associated with job satisfaction. These included stress, commitment, communication (with supervisor and peers), autonomy (and locus of control), recognition, reutilization, and fairness. (1)

Recognition of frustrations, such as turnover, lack of internal empowerment, burnout, and, elimination of external sources of stress can decrease dissatisfaction in the health care setting (4).

Thus, identification of the factors related to job satisfaction and exploration of their effects on job satisfaction have the potential to aid the development of employment strategies to improve retention and reduce turnover (5). After all, high levels of absenteeism and staff turnover can affect the administrators' bottom lines, as temps, recruitment, and retaining take their toll (2).

Business process reengineering (BPR) began as a private sector technique to help organizations fundamentally rethink how they do their work in order to dramatically improve customer service, workers satisfaction, cut operational costs, and become world-class competitors (6).

First introduced in the 1990s in the United States to try and save local companies from fierce Chinese competition, the reform program, Business Process Reengineering (BPR), aims to improve the performance and efficiency of organizations (7).

A key stimulus for re-engineering has been the continuing development and deployment of sophisticated information systems and networks. The Business Process Reengineering method (BPR) is the fundamental reconsideration and radical redesign of organizational processes in order to achieve drastic improvement of current performance in cost, services and speed

(Hammer, 1990; Thomas H. Davenport and J. Short, 1990; Hammer and Champy, 1993). Their claim was simple: most of the work being done does not add any value for customers, and this work should be removed, not accelerated through automation. Instead, companies should reconsider their processes in order to maximize customer value, while minimizing the consumption of resources required for delivering their product or service (6).

Initially it was difficult to undertake the reform in Ethiopia because of current bureaucracy of very hierarchical with many non-value adding works/positions/staffs, nepotism and lack of transparency and accountability, and corruption), lack of leadership capacity, input based and not output based – i.e. output not measured (7). Over time it was believed that an important condition to undertake the reforms was to implement BPR (6). It was identified that to solve the problems of hierarchical bureaucracy with many non-value adding works/staffs/positions, nepotism, etc; BPR is seriously implemented in all public institutions gradually (6).

The reason why the Ethiopian government adopted BPR is that the current system has to be completely changed and redesigned in order to improve the performance and efficiency of public organizations (6, 7).

1.2. Statement of the problem

It has been shown that when job satisfaction decreases, may be vary according to individual characteristics, expectations, style of management, changes to policy and individual lifestyle choices, turnover increase (1). As a growing segment of the population ages and strains the capacity of these institutions, most are having difficulties in finding and retaining qualified nursing staff (2). Improved job satisfaction, on the other hand, results in increased productivity (3).Turnover rates of 35% to 55% in first year of employment have been reported in the US as well in the UK nursing employment fell to 82% 3 years after qualification in a longitudinal study of early career nurses (4). Turnover rates among nonsupervisory hospital nurses ranging from 37% to 67 % per year are reported in recent studies (5).

Rapid turnover has been found to have negative physical and emotional effects on nursing home residents, leading to a greater incidence of falls, medication errors, fear and anxiety, and feelings of hopelessness (2).

The United States is facing a growing shortage of registered nurses (RNs) the shortage is projected to intensify, if unaddressed, growing from 12 %t in 2010 to a projected 29 % in 2020 (6). Coupled with this is evidence that job dissatisfaction is driving nurses to leave the profession

The gravity of the economic loss and the impact on knowledge production is made obvious if one considers that an estimated 9,000 South African professional nurses and midwives are working abroad, mostly in developed countries (6). The average cost of hospital sponsored orientation of newly hired registered nurses in a hospital of 500 or more beds is estimated at $130,878 in annual salary costs of training staff and orienteer combined(5).

The shortage and high turnover of workers' is of great concern in many developing countries including Ethiopia manly due to economic situation (7).

In Ethiopia the findings of research conducted in 2007 shows that about 80% of the health workers are either "unsatisfied" (20%) or "completely unsatisfied" (60%) with their economic Situation, compared to less than 10% in 2004 also fewer health workers are dissatisfied with their chances of promotion and access to further training (8).Among the health workers nurses are the second most unsatisfied next to physicians (8). The Ethiopia civil service minister had practiced salary improvement and changing the overall working environment to make conducive for employee's periodically but still there is a discrepancy, on what is current working circumstance and expected to be, to fill this gap the government recently apply a new working system called business processing and re-engineering(BPR) since 2001E.C.

Much research was done but manly pointed on specific variables. This paper focus on assessing level of job satisfaction among hospital nurses and its most prominent determinant factors before and after the implementation of business processing and re-engineering (BPR) program in order to improve their satisfaction levels by disseminating the result for those respected official authority, policy makers, ministry of health (MOH), Ethiopian nurse association (ENA) and the like. It should be of great concern to any health care organization since they hold the majority of positions in most health care settings, directly related with patient satisfaction and replacement of licensed personnel is costly and time consuming.

1.3. Significant of the study

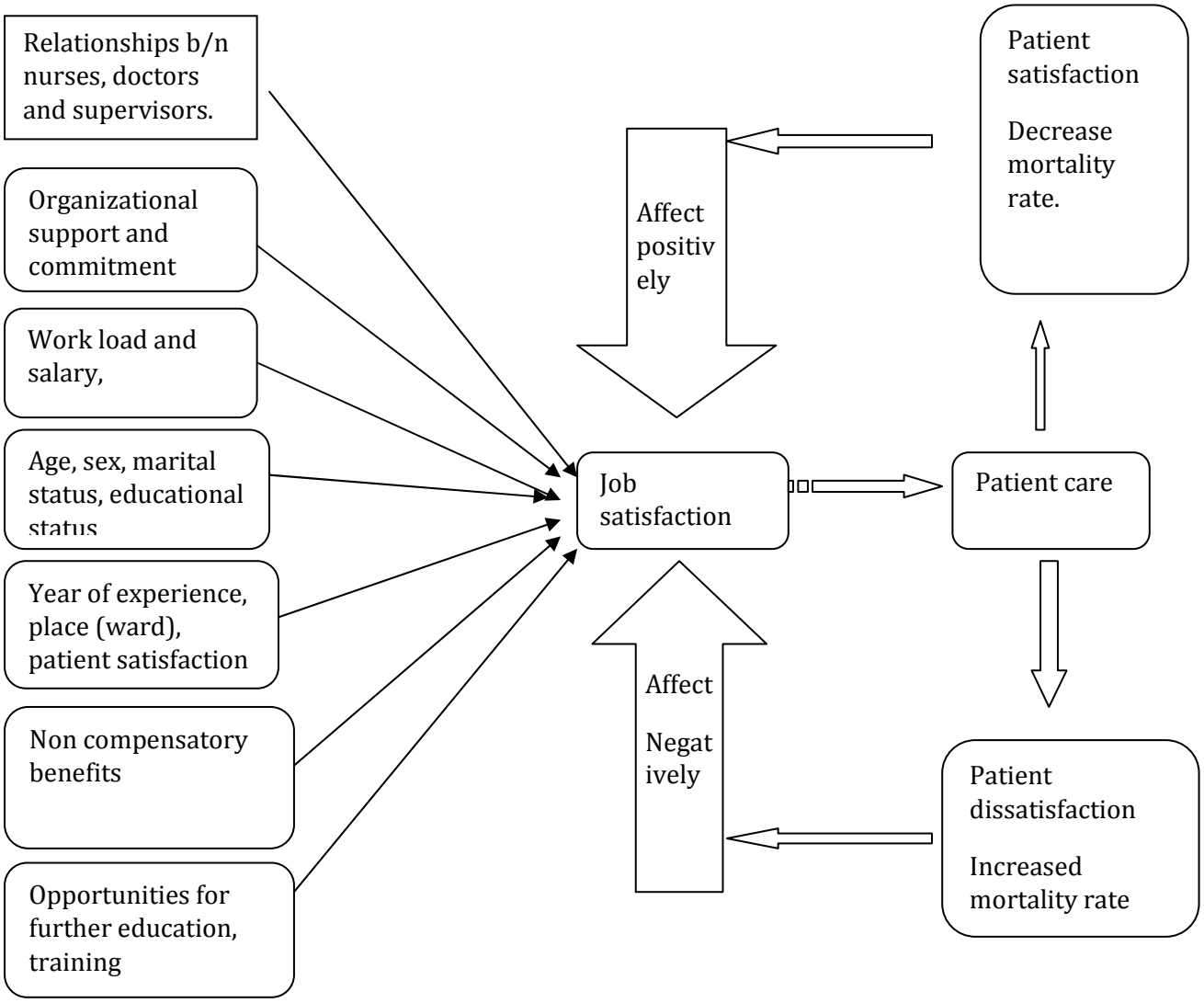
This study intended to assess the level of nurses' and midwifes job satisfaction and its determinant between functional and business processing re-engineering method of organization in selected one referral and one zonal hospitals. Hence, it is assumed to be important for the following reasons: To

- Assess overall basic factors for their satisfaction or dissatisfaction between functional and business processing re-engineering method of organization because much of the study conducted before focuses on a single variables and also the effectiveness of the program on nurse's job satisfaction.
- Forward applicable recommendation so that concerned authorities can take timely measures either to improve more or alleviate the problem.
- Contribute for the formulation of better and appropriate working environment.
- Serve as a stepping stone for other researches to be conducted in the future

1.4. Conceptual framework

All listed factors may affect job satisfaction positively or negatively ~ affect patient care positively or negatively again patient satisfaction affect job satisfaction positively or negatively among hospital nurse staff.

Figure1: A Schematic diagram of the conceptual framework



Developed by the investigator

2. Literature review

2.1 Theories of job satisfaction

Understanding what motivates workers and how this impact on performance has always interested organizations and managers and different theories have sought to answer this question. Fung-Kam identified four general theories: need/value fulfillment theory; person-environment (P-E) fit theory, the theory of career and the theory of work adjustment (1).

Similarly Adams and Bond classified job satisfaction theories into three groups: discrepancy theories, which examine the extent to which employee's needs are satisfied in the work place; equity theories, which highlight social comparisons in the evaluation of job rewards; and expectancy theories which focus on employee motivations (1).

The theory of need/value fulfillment proposes that the discrepancy between individual needs and the extent to which the job meets these needs is negatively related to job satisfaction and expectation gaps have been linked to the violation of the psychological contract between employer and employee also theory of P-E fit suggests there are person characteristics that suit working environments better than others and working environment characteristics that suit certain individuals better (1).

Drawing on both theories failure to meet expectation has been shown to be related to lower work commitment of graduates and the extent they 'fitted' in was a central motivation to remain with an employer and connected to P-E fit is the theory of work adjustment. This theory is concerned with the degree of correspondence between individuals and their work environments (1).

Hackman and Lawler believed that the employees' perception of their job rather than the jobs objective characteristics was a more important determinant of job satisfaction (1).

The two theories that have been important in the development of an understanding of job satisfaction in nursing are Maslow's human needs theory and Herzberg and Mausner's motivation-hygiene theory. Maslow identified two types of needs; deficiency needs (physical, safety and belonging) and growth needs (self-actualization and self esteem) (1).

Herzberg and Mausners' theory consists of intrinsic factors or 'motivators' that promote job satisfaction and extrinsic factors or 'hygiene factors' that cause dissatisfaction (1).

Kramer's reality shock theory is based on the reaction new nurses feel once they enter a work situation that they are unprepared for and has also been used to understand job satisfaction in nurses in early career (1).

2.2 Determinants of satisfaction

Blegen synthesized findings from 48 studies and identified thirteen variables that were most strongly associated with job satisfaction. These included stress, commitment, communication (with supervisor and peers), autonomy (and locus of control), recognition, reutilization, and fairness (1).

A secondary analysis of data from the 1977 Quality of Employment Survey found that task variety, relations with co-workers, financial rewards and age were all positively associated with job satisfaction. Conversely role conflict and tenure had negative effects although the latter finding was not consistent with other literature. Work attitudes (supervisor support, work-group cohesion, variety of work, autonomy, organizational constraint, promotional opportunities, work and family conflict, and distributive justice) were also important in explaining the job satisfaction of registered nurses in the United States (1).

Different managerial styles and practices at the organizational unit level (e.g. ward) can have a direct bearing on nurse satisfaction. The work of Adams and Bond highlighted the importance of interpersonal relationships with nurses and other medical staff, workload and ward cohesiveness. A number of studies have shown a positive association between autonomy and levels of job satisfaction and which has been confirmed amongst nurses (1).

The effect of educational level on job satisfaction has been conflicting. Some studies have found a positive association with job satisfaction and others a negative association. Lower level qualifications impacted positively on job satisfaction based on findings from a survey of NHS nurses. The same study found training had a positive impact on job satisfaction but diminished with the number of training spells. The inverse relationship supports the argument that education raises expectations that subsequently are not met whereas a positive correlation suggests that the greater extrinsic rewards that come with education raises satisfaction (1).

Blegen found that job satisfaction correlated less strongly with age or years of experience, while Shields and Ward found that increasing age, marriage, and children impacted positively on nurses' satisfaction (1, 2).

In a study of nurses working in the NHS individuals who stressed non-pecuniary reasons (e.g. flexibility of hours, helping others) had significantly higher job satisfaction than those who did not (e.g. attracted by job security, promotion prospects, pay). Not being graded fairly was the largest negative determinant of overall job satisfaction and not having the hours to suit an individual's preference had a negative impact. Absolute and relative levels of pay (compared with other occupational groups) are also important (1, 4, and 8).

Satisfied employees tend to be more productive, creative, and committed to their employers, and recent studies have shown a direct correlation between staff satisfaction and patient satisfaction in health care organizations (2). It has been shown that when job satisfaction decreases, may be vary according to individual characteristics, expectations, style of management, changes to policy and individual lifestyle choices, turnover increase (1). Improved job satisfaction, on the other hand, results in increased productivity (3).

Wilson (2005) stated that recruitment and retention efforts need to concentrate on increasing financial incentives to these staff members and creating a desirable work place that will lead to greater job satisfaction because the expertise required of direct caregivers and the heavy workload they are assigned often far exceed the financial compensation they receive(2)

Job satisfaction in staff nurses should be of great concern to any organization because they hold the majority of positions in most health care settings, and replacement of licensed personnel is costly and time consuming (4). Studies of job satisfaction among hospital nurses are important because of the relationship between satisfaction and job turnover and performance (5).

In one of the largest samples of its kind exploring various components of job satisfaction among registered nurses (RNs), just over half of respondents indicated they "enjoy" their work (53 %), while nearly two-thirds (63.3 %) said they are satisfied with their jobs, a survey by the American Nurses Association (ANA) has found (9). In Mainland China More than half of nurses (53.7%; *n*=275) were satisfied or very satisfied with their jobs and 15% (*n*=77) felt moderate to extreme occupational stress (10).

Currently Nursing shortage is the ongoing condition in the United States and several other developed nations such as the UK, Austria, Norway, Japan, and Australia (11, 8).

As of 2009, U.S. medical facilities were in need of an additional 100,000 nurses also by 2012, there could be up to 1.1 million unfilled nursing positions in the United States as of the newly opened career opportunities for women today to seek out fields other than nursing because of difficult and risky working conditions discourage younger women from pursuing nursing (11).

Burnout is positively associated with job dissatisfaction. Garret and McDaniel (2001) described environmental uncertainty as being important in all aspects of burnout. Aiken et al. (2002) reported nurses with the highest nurse-to-patient ratio experience burnout and dissatisfaction more than twice as much as those with lower ratios. The researchers noted that 43% of nurses who reported high levels of burnout and dissatisfaction intended to leave their jobs within a year. This was compared to nurses who did not complain of burnout or dissatisfaction. Only 11% of these nurses intended to leave their current jobs (12).

In Kuwait a positive relationship between job satisfaction and organizational commitment has been reported by studies involving qualified professionals (3). A study was conducted by Wu & Norman (2005) in a nursing department of a medical university in China with a sample (75) of full time final year (clinical practice year) degree level nursing students and found a positive correlation between job satisfaction and organizational commitment ($r = .464$, $P < .01$), indicating that student nurses who were more satisfied with the nursing as a job were also more committed to the health care service (2).

Redfern, Hannan, Norman, & Martin (2002) reported a strong relationship between job satisfaction and organizational commitment ($r = .60$, $P < .001$), in a study of the health care staff in the United Kingdom (2). Similarly, Al-Aameri (2000) found a strong positive correlation between job satisfaction and organizational commitment with a sample of registered nurses in

Saudi Arabia ($r = .59$, $P < .01$). Age was significantly correlated with satisfaction and commitment, but experience was correlated only with commitment (2). This finding is consistent with a large survey of qualified nurses in the United States conducted by Ingersoll, Olsan, Drew-Cates, DeVinney, and Davies (2002), which revealed a closely positive correlation between job satisfaction and organizational commitment ($r = .63$, $P < .001$) (2). The multiple regression performed in this study indicated that 92% of the variance in job satisfaction was accounted for by the linear combinations of organizational support, organizational commitment, and level of education, transactional and transformational leadership. Organizational support was determined to be the strongest predictor of the five variables and transactional leadership was the weakest predictor of job satisfaction (2).

Aiken and others found that nurses experience frustration and burnout because of lack of control over work conditions that determine the job for which they are responsible. Other studies have shown that nurses felt they were not treated as clinicians or peers by doctors and hospital managers but as assistants, at risk of being replaced by less-qualified personnel who cost less to employ (13).

The RN Satisfaction report was based on input from 76,000 RNs from hospitals across the country (9).In the RN Satisfaction report, conducted through ANA's National Database of Nursing Quality Indicators (NDNQI), registered nurses (RNs) report the highest levels of satisfaction with regard to interactions with other RNs (67%), their professional status (65 %) and career development opportunities (61 %), and moderate levels of satisfaction regarding interactions with doctors (58 %), nursing management (56 %), nursing administration (54 %), decision-making (47%), tasks (47%) and pay (40%) (9).

Levels of job satisfaction for each category varied somewhat, depending on the unit in which the nurses worked. For example, maternal-newborn and pediatric RNs reported higher levels of job enjoyment than their counterparts working in medical-surgical, critical care, step-down and emergency rooms (9).

Studies of nurse burnout and magnet hospitals in the United States concluded that professional development, cooperation with medical staff and managerial support were highly important for nurses (13). Work organization was also an important predictor for nurses' job satisfaction. This is in line with findings that cohesive working relationships, cooperation with medical staff and appropriateness of the system of nursing was important for nurse job satisfaction in the United Kingdom (13).

In United States nurses have access to many non compensatory benefits and report that having these benefits is important to them (14). More than four-fifths (84%) of nurses surveyed reported that benefits were somewhat or very important to staying in their current position (14).

According to American psychiatric association levels of overall satisfaction among the RNs did not differ for shift; however, those working night shifts were significantly less satisfied than those working other shifts (15).

In terms of tenure, RNs who had been employed at the hospital for six months or less had relatively high levels of satisfaction, RNs who had been employed for six months to five years had significantly lower levels of satisfaction, and RNs who had been employed longer than five years had a significant rebound in satisfaction, similar to levels reported within six months of hire also the RNs who worked in partial or outpatient programs reported being significantly more satisfied than those who worked in residential treatment centers (15).

In Mainland China In particular, organizational commitment was identified as a critical factor explaining 31.1% of the variance in job satisfaction. While it has been suggested that the concept of organizational commitment may be culturally specific (Glazer et al. 2004), this finding supports the work of Knoop (1995) in Canada and provides evidence that individual employing organizations need to work towards developing initiatives that reflect the needs of their particular workforce (16).

In mainland Greece a positive moderate association was found between reported autonomy, job satisfaction, and role conflict and role ambiguity, but there was no relationship between job satisfaction and reported role conflict and role ambiguity (17).

In Mainland China the majority of the sample reported a high level of organizational commitment (63.7%; n=326) and professional commitment (85.9%; n=440) and only 5.9% (n=30) and 10.0% (n=51), respectively reported role conflict and role ambiguity often or very often (10). Nurses with a diploma or associate degree reported greater professional commitment and a lower level of role conflict than those with a bachelor degree (p<0.05), but there were no significant differences in job satisfaction, organizational commitment, occupational stress and role ambiguity by educational program (p>0.05) (10).

According to Tourangeau and Cranley (2006), “previous research has shown that stronger nurse intention to remain employed is associated with higher job satisfaction, higher organizational commitment, higher perceived manager support, lower burnout, higher work group cohesion, being older, having more years of nursing experience and having lower levels of education” (18). They found out that there are “possible strategies to strengthen predictors of intention to remain employed include employment practices that reflect moral integrity, incorporate clear

communication systems, maximize employee involvement in decision-making, promote praise and recognition, and establish a shared vision and goals" (18).

In Kuwait from the total 370 surveyed health professionals nurse holds 174 among them 43 (24.7%) dissatisfied, 69 (39.7%) fairly satisfied, 62 (35.6) very satisfied (3).

Investigating the relationship between the organizational structure variables, formalization, centralization and specialization, and nurses' job satisfaction a random sample of 764 non-managing nurses in three Belgian general care hospitals and they showed negative effect of centralization and the clearly positive effects of specialization and formalization on nurses' job satisfaction but these effects differ according to the different dimensions of satisfaction (19).Furthermore, pay is the most important dimension of nurses job satisfaction but the dimension least influenced by organizational structure (19).

Research conducted in hospitals of the Isfahan University of Medical Sciences Iran, the results showed that 73% of the study population believed that head nurses' interpersonal relationship manners were excellent and just 3.4% claimed it to be weak. Majority of participants (65%) had excellent job Satisfaction considering their current managers and just 2.4% mentioned it is weak. There is a significant association between the two ($p < 0.011$) (20).

A cross-sectional survey of professional nurses conducted throughout South Africa using a pre-tested and self-administered questionnaire. A total of 569 professional nurses participated in the study. Of the respondents, 34.8 % indicated an intention to change their sector of employment within the next five years while only 30.2 % reported that they would most likely still be in their current positions as professional nurses in five years time. Of the nurses, 15.7 % reported that they intend to work abroad within the next five years (21).

In South Africa, Overall, professional nurses were found to be generally dissatisfied with remuneration being a key contributor to dissatisfaction but also by their career development opportunities (2.595) and the resources available to them (2.727) as well Poor working conditions and organizational climate were also strong predictors of dissatisfaction however, express greatest satisfaction in their relationship with patients and the gratification they obtained from patient care (3.734), their relationship with their nursing colleagues (3,582), doctors (3.391) and their sense of belonging in the communities within which they work (3.368) (22). Female nurses were generally more satisfied with resources than their male colleagues ($F = 3.85$, $p < 0.05$), while nurses above age 40 were significantly more satisfied than their younger colleagues with their relationships with management ($F = 2.831$, $p < 0.05$) and with doctors ($F = 4.611$, $p < 0.01$) (22).

In a survey conducted 700 questionnaires were sent out of which 213 were returned which gives a response of 30.43 %. The analysis was based on this data. It was, however, clear from the response that there exists a strong negative view amongst the nursing profession regarding remuneration, communication, training and promotion (23). These are tendencies that can harm the profession as a whole on the long run and should therefore receive special managerial attention (23).

In Ethiopia the findings of research conducted in 2007 shows that about 80% of the health workers are either “unsatisfied” (20%) or “completely unsatisfied” (60%) with their economic Situation, compared to less than 10% in 2004 also fewer health workers are dissatisfied with their chances of promotion and access to further training (8).Among the health workers nurses are the second most unsatisfied next to physicians but the current wage has a positive impact on the level of satisfaction with all spheres of life (8).

Regarding the overall level of job satisfaction, studies in 2010 conducted in Addis Ababa governmental hospital revealed that only 112 (37%) of nurses were “satisfied” with their job whereas, the majority 188(63%) of the respondents were “dissatisfied” with their job (24). This study shows that there was a statistically significant association between working experience in the field of nursing (tenure) and job satisfaction (F= 42.83, df=2, p=0.0001). The lowest mean satisfaction score (3.24 ± 0.46SD) was for less than 5 years and the highest mean (3.74±0.33SD) was for 5-10 years tenure category (24).

Also, the study shows a negative and strong correlation was observed with “salary” and found statistically significant and association with job satisfaction. Therefore, compensation was the only hygiene factor that causes no job satisfaction in this study subject (24).

3. Objective of the study

3.1. General objective

- To compare levels of professional nurses and midwives job satisfaction and its determinants between functional and business processing re-engineering (BPR) method of organization in Hawassa university teaching hospitals, SNNPR, Ethiopia

3.2. Specific objectives: to

- Describe nurses' and midwives job satisfaction before business processing re-engineering (BPR) implementation.
- Describe nurses' and midwives job satisfaction after business processing re-engineering (BPR) implementation**.**
- Identify determinant factors associated with satisfaction/dissatisfaction during functional method of organization.
- Identify determinant factors associated with satisfaction/dissatisfaction after business processing re-engineering (BPR) implementation.

4. METHODS AND MATERIALS

4.1. Study area:

The study was conducted in Hawassa Referral hospital which is located 275 km south of Addis Ababa at Hawassa town which is the capital city of southern nation and nationalities of peoples region (SNNPR). It is the only governmental hospital in Hawassa town. It is newly constructed hospital and gives health service since 1999E.c for the whole SNNPR peoples as referral hospital. Moreover this hospital is a teaching hospital under Hawassa University (26).

Yrgalem hospital found in Yrgalem town located in the SNNPR Sidama zone, Dale woreda. It is about 312km, 42km and 3km south of Addis Ababa, Hawassa town and north of the center of the town respectively. This hospital is established initially by Norwegians and gives health service for all SNNPR people as referral hospitals before the opening of Hawassa referral hospital (26).

4.2. Study design:

Institutional based cross sectional descriptive study complimented by focus group discussion was conducted in Hawassa referral hospital, and Yrgalem zonal hospital regarding levels of job satisfaction of professional nurses and midwifes and its determinant between functional and business processing re-engineering (BPR) method of organization.

4.3. The study period and study population:

The study was carried out from October, 2010 to April, 2011. Out of 200 a sample of 141 full time nurses working in Medical, surgical, pediatrics, obstetrics/gynecology and outpatient unit whom work at least three months both in functional and business processing re-engineering (BPR) method of organization was included in the study from those mentioned one referral and one zonal governmental hospitals found in Hawassa and Yrgalem town, SNNR, Ethiopia.

4.3.1. Inclusion criteria:

All selected via lottery method and volunteer to participate full timer nurses who worked for three months both in functional and BPR method of organization in the respected hospitals of medical, surgical, pediatrics, obstetrics /gynecology and outpatient unit.

4.3.2. Exclusion criteria:

Due to the nature and scope of the research, the following sections of nurses and midwifes were exclude from the study.

- Per timer nurses
- Full timer nurses who refused to enroll in the study
- Nurses worked less than three months both in functional and BPR method of organization.

4.4. Sampling procedure and sample size determination

4.4.1 Sampling procedure:

Hawassa University, school of nursing commonly use five teaching hospitals such as: Hawassa, Kuyera referral hospitals, and Yrgalem, Dilla, and Otona zonal hospitals, for clinical practice of nurses and midwifes student. Among these two hospitals was selected using simple random sampling techniques/lottery method. Based on these, two hospitals Hawassa referral hospitals, and Yrgalem zonal hospitals were selected for the study.

4.4.2. Sampling size calculation

4.4.2.1 Quantitative method

The sample size for the study was determined based on the formula for single population proportion. The study assumes the prevalence of nurses' job satisfaction as 63% (24). The level of significant was taken as 95%, ($z\acute{a}^{2\ =1.96}$) assuming 5% marginal error. To compensate for the non-response rate 10% was added. The following formula was used as follow:

$n= \quad z^2 p (1-p)/d^2$

Where:

n-The required sample size

1-The value of the standard normal

P- Proportion of nurses job satisfaction (63%)

d- The permissible margin of error (the required precision=5%)

Z- Critical value at 95% confidence level of certainty (1.96)

Using the above formula:

$$n = \frac{(1.96)2 \times 0.63(1-0.63)}{(.05)2} = 358$$

Since the total source of population is 200 which is less than 10,000 the sample can be adjusted using final correction formula. Hence **nf = 128**

Assuming a non-response rate (NR), incomplete questionnaire and lost questionnaire 10%

n= 141

But for obtaining the study subject from each hospital Proportionate Stratified random sampling was used. First total number of nurses was obtained from each hospital then refined only those who fulfill the inclusion criteria and how many of them found in each ward. Finally the sample was distributed for each hospital using the following procedure:

j = 1, 2... K where, k is the number of strata

$$n_j = \frac{n}{N} N_j$$

- n_j is sample size of the jth stratum
- N_j is population size of the jth stratum
- $n = n_1 + n_2 + ...+ n_k$ is the total sample size
- $N = N_1 + N_2 + ...+ N_k$ is the total population size

Then n_j was distributed again to each five units of the hospital proportionally after obtaining the exact number of subjects who fulfil the inclusion criteria then by using lottery method study subjects was selected from each of five units.

4.4.2.2 Qualitative method

The qualitative data was collected by conducting focus group discussions by the researcher. Each four group contained randomly selected ten nurses from five units of selected hospitals.

4.5. Data gathering tools

For quantitative study well-structured questionnaire was prepared in English language then translated in to Amharic language and fill by nurses who fulfill the inclusion criteria. The questionnaire included socio-demographic, back ground information, levels of job satisfaction/dissatisfaction and its determinant factors between functional and BPR method of organization experienced by nurses and midwifes prepared in a Liker's scale.

For the qualitative study two focus group discussions (FGD) was conducted in each hospital separately with a total of ten randomly selected nurse discussants in each group until optimum saturation of information was obtained. The principal investigator guide the discussion using a carefully developed check lists that contains a list of questions with points related to nurse's job satisfaction and its determinant factors between functional and BPR method of organization comparatively.

The discussion was held in a conducive and quite room of each hospital by maintaining confidentiality with a circular sitting arrangement. Notes were taken but impossible to use a tape recorder. Each discussion was taken about 11/2 hour.

4.6. Pre testing the questionnaire

The questionnaire was pre-tested by 10% of the total sample in Hawassa referral hospital nurses in order to improve the validity and reliability of the question items based on comments and responses of respondents.

4.7. Procedures of data collection

A priory contact was made with a sample of respondents' explaining the objectives and purpose of the study in order to maximize the return of the draft questionnaires. Finally, the main self-administer questionnaires was distributed to all actual respondents. To maintain its confidentiality it was filled by preserving anonymity of respondents. Half days of training was given for data collectors.

4.8. Data quality assurance

- Pre-test was done.
- Training was given for data collectors (half day).
- Frequent supervision and immediate validation/monitoring were made during and after collection to check the fullness of the questionnaire.
- Data collection guide was used.
- Moreover, appropriate document analysis was made to validate the accuracy of data gathering.

4.9. Data management

All quantitative data gathered from respondents were categorized, coded, and entered in to EPI info and transported in to SPSS version 16.0 software for analysis. During the analysis frequencies and association between dependent and independent variables was made and presented using frequency, mean, crude and adjusted odds ratio. Statistical significant was set at p-value < 0.05.

For the purpose of analysis the overall level of job satisfaction is categorized in to two, either satisfied with mean score of 56.14 – 95 and 58.17- 95 or dissatisfied with mean score of 19 - 56.13 and 19 – 58.16 both during functional and BPR method of organization respectively based on their means. Also, each variable are grouped in to four by considering the nature of the question and the results are categorized to good and bad category, based on their respected means. Finally, the result was presented using table, graph, chart and text but the qualitative one was analyzed manually only in the form of text.

4.10. Plan for dissemination of the result

The final result of this study was submitted to centralize School of Nursing, College of health science, Addis Ababa University and other concerned officials like Hawassa university referral hospital, Yrgalem regional hospital. The result of this study will be used by hospitals as planning tool for future satisfaction of nurse professionals'. Also, for policy makers, ministry of health (MOH), Ethiopian nurse association (ENA) and the like.

4.1. Variables

4.11.1 Independent variables

Socio-demographic variables such as age, sex, marital status, educational status, year of experience, and satisfaction related variables such as salary, carrier developmental opportunity, work lodes, place they work (wards), organizational support, non-compensatory benefits, communication between nurses/ nurse-doctor/nurse-supervisor.

4.11.2 Dependent variables

Level of job satisfaction

4.12. OPERATIONAL DEFINITION OF TERMS

- **Job satisfaction**: the feeling of pleasure that comes when a need or desire is fulfilled in working area.
- **Workloads**: the amount of work assigned to a person or group to do in a specific period.
- **Role ambiguity**: a confusion of role or responsibilities in which a person unable to understand clearly his/her responsibilities in the institution.
- **Job dissatisfaction**: the feeling of discontent that comes when a need or desire is not fulfilled in working area.

- **Burnout**: psychological exhaustion and diminished efficiency resulting from overwork or prolonged exposure to stress.
- **Turnover**: change in employees.
- **Job stress**: a situation in which some characteristics of the work situation are thought to cause poor psychological or physical health, or to cause risk factors making poor health more likely.
- **Hawassa university teaching hospitals:** those hospitals in which a nursing and midwife students of Hawassa University, school of nursing exposed for clinical practice.
- **Functional method of organization:** method of organizing institutions before business processing re-engineering comes fore.
- **Non compensatory benefits:** benefits for which compensation would not require like annual leave and so on

4.13. Ethical consideration

Ethical clearance was obtained from Addis Ababa University, Centralized School of Nursing institutional Review Board (IRB). The respected hospitals were notified with official letters from Addis Ababa University (AAU). Informed consent was obtained from the study participants. Moreover, a participant confidentiality of information was assured by maintaining anonymity also participants was informed as the obtained information will be used only for the purpose of study.

5. Results

5.1. Interpretation and analysis of the quantitative data

5.1.1. Socio demographic characteristics of respondents

Table 1.Socio demographic characteristics of Hawassa referral and Yrgalem zonal hospitals, SNNPR, Ethiopia, 2010/11

Characteristics		**Number**	**Percent (%)**
Total participants 122			**100%**
Age	20-29yrs	81	66.4
	30-39yrs	33	27.0
	40-49yrs	6	4.9
	≥ 50yrs	2	1.6
Sex	Male	31	25.4
	Female	91	74.6
Educational status	Diploma in nursing	109	89.3
	BSc degree in nursing	13	10.7
Ethnicity	Amhara	34	27.9
	Sidama	25	20.5
	Wolayta	21	17.2
	Gurage	18	14.8
	Others	24	19.7
Religion	Orthodox	62	50.8
	Protestant	47	38.5
	Muslim	12	9.8
	Jehovah	1	.8

Marital status	Married	71	58.2
	Single	47	38.5
	Divorced	3	2.5
	windowed	1	.8
Work experience in nursing	2 – 6	78	63.9
	7 – 11	25	20.5
	12 – 16	10	8.2
	≥ 17	9	7.4
Place of work (ward/department)	Surgical Ward	35	28.7
	Outpatient department	34	27.9
	Obs/gyne	22	18.0
	Medical Ward	16	13.1
	Pediatrics Ward	15	12.3

A total of 141 questionnaires were distributed of which 122(86.5%) were fully responded while 19(13.5%) refused or incompletely responded, and excluded from data analysis.

Among the total number of 122 respondents 81(66.4%) were found between the ages of 20-29, 33(27%) between the ages of 30-39, 6(4.9%) between the ages of 40-49, and the rest 2(1.6) were found greater than fifty years old. With regards to sex 91(74.6%) were females and the rest 31(25.4%) were males.

Concerning their educational background the majority of nurses 109(89.3) were diploma holders, the remaining 13(10.7) Bsc degree. Most of the respondents were Amhara 34(27.9%) followed by Sidama 25(20.5%), Wolayta 21(17.2%), Gurage 18(14.8%) and Others 24(19.7%).

The marital status of the respondents showed, 71 (58.2%) were married, 47(38.5%) were single, 3(2.5%) were divorced, and 1(0.8%) widowed. The majority of the respondents, 62(50.8%) were Orthodox in religion followed by 47(38.5%) protestant, 12(9.8%) Muslim and others 1(0.8%)

Concerning the work experience in nursing 78(63.9%) were found between 2-6yrs, followed by 25(20.5%) between 7-11yrs, 10(8.2%) 12-16yrs, 9(7.4%) were found more than 17yrs.

Place of work/ unit of case team as one component element of socio demographic data was also considered and the information in this regard showed that among the total study subjects 35(28.2%) were work in surgical ward, 34(27.9%) in outpatient department, 22(18.0%) in obs/gyn, 16(13.15%) in medical ward, 15(12.3%) in pediatrics ward.

Regarding future study intention, 61(50.0%) intended to study nursing, 35(28.7%) health officer (HO) and the rest 26(21.3%) of respondents preferred different social and natural science. As described below in figure.

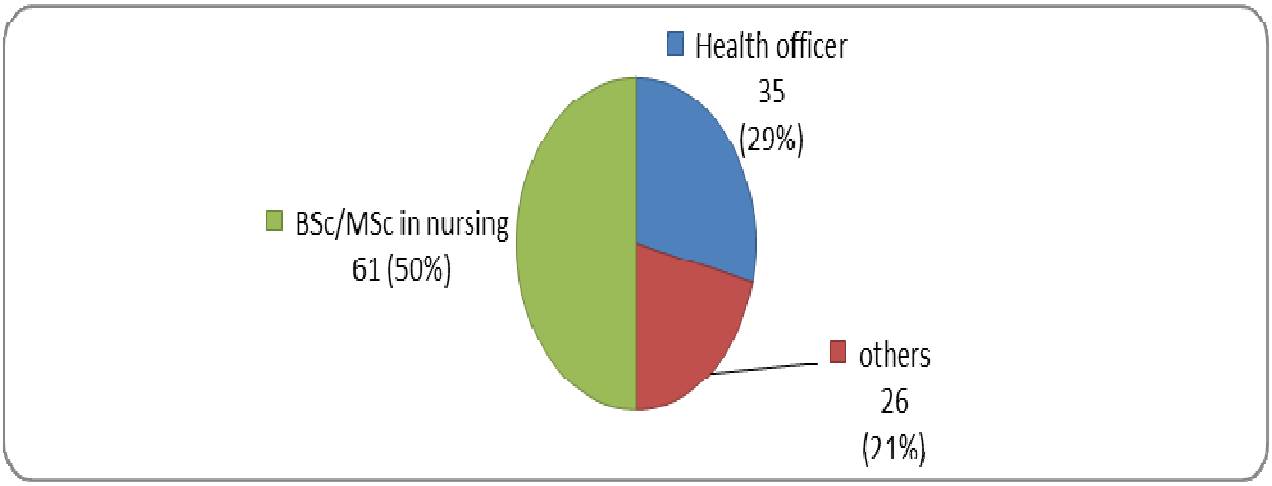


Figure 2. Interests of respondents to learn in the coming five year 2010/11, HUTHs, SNNPR, Ethiopia

Finally, as the graph shows below, regarding for the question where do you plan to work in the comeing five years if conditions meet, out of the total respondents 41(33.6%) choose to continue on their current hospital, 38(31.1%) prefer to work in nongovernmental organization (NGO), 33(27.0%) in other governmental hospitals and the remaining 10(8.2%) in abroad.

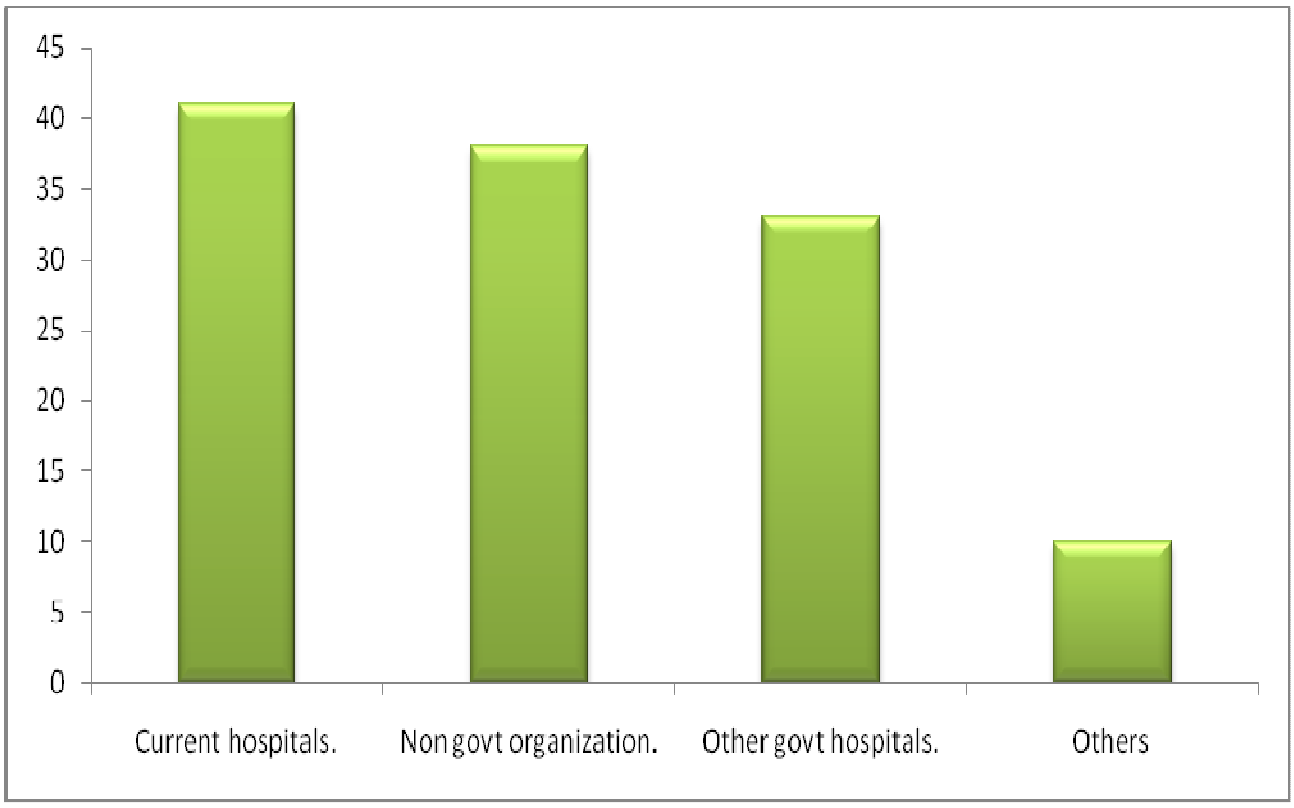


Figure 3. Interests of organizations by nurses and midwives to work in the coming five year 2010/11, HUTHs, SNNPR, Ethiopia

5.1.2. Over all nurses and midwives job satisfaction between functional and business processing re-engineering (BPR) method of organization

Knowing the Overall nurses and midwives job satisfaction between functional and business processing re-engineering method of organization in a comparative way was believed to be crucial in order to assess the impact of a new method of organization (BPR) on nurses and midwives job satisfaction which in turn has a great contribution on patient satisfaction and reduction of mortality rate in his/her stay in the hospitals.

As the data showed that before BPR implementation from the total 122 respondents 66(54.1%) were satisfied, 56(45.9%) were dissatisfied but after BPR implementation the difference was almost equal 62(50.8%) were satisfied, 60(49.2%). The overall data is described below in table.

Table 2. Over all nurses and midwives job satisfaction between functional and business processing re-engineering (BPR) method of organization in Hawassa university teaching hospitals, SNNPR, Ethiopia 2010/11

Level of job satisfaction	Job satisfaction before BPR		Job satisfaction after BPR	
	Frequency	Percent	Frequency	Percent
Satisfied	66	54.1%	62	50.8%
Dissatisfied	56	45.9.%	60	49.2%

5.1.3. Determinant factors for job satisfaction of nurses and midwifes between functional and BPR method of organization.

Table 3 Comparisonnal study of determinant factors for job satisfaction of nurses and midwives between functional and BPR method of organization in Hawassa university teaching hospitals, SNNR, Ethiopia 2010/11

Variables	Level of interest	Before BPR		After BPR	
Total participants 122		**Value**	**percentage**	**Value**	**Percentage**
General working conditions	Good	60	49.2%	70	57.4%
	Bad	62	50.8%	52	42.6%
Payment and promotion potential	Good	56	45.9%	57	46.7%
	Bad	66	54.1%	65	53.3%
Relationships with co-workers	Good	67	54.9%	68	55.7%
	Bad	55	45.1%	54	44.3%
Use of skills and abilities	Good	52	42.6%	55	45.1%
	Bad	70	57.4%	67	54.9%

From the above table concerning General working conditions in a comparison way between functional and BPR method of organization as determinant factors 62(50.8%) were feel bad and 60(49.2%) were feels good but after BPR implementation 70(57.4%), 52(42.6%) were state good and bad respectively. It includes work load (22□, 54đ and 62ª , 37□), flexibility of schedule (61□, 30đ and 55ª , 34□), geographical location of hospitals and transport service by institution, amount of paid vacation time, suit of educational qualification and job status (29□, 39đ and 50ª , 35□), distributive justice (25□, 51đ and 33ª , 54□), and participation in decision making process (27□, 50đ and 36ª , 63□) the remaining respondents from each variables were neutral.

Regarding Payment and promotion potential in a comparison way between functional and BPR method of organization as determinant factors 66(54.1%) were feels bad and 56(45.9%) were feels good but after BPR implementation almost similar results 57(46.7%), 65(53.3%) were assumed good and bad respectively. It includes salary (8□, 90đ and 20ª, 61□), opportunity for promotion (10□, 73đ and 17ª, 78□), job security, benefits (25□, 82đ and 25ª , 80□), recognition for work accomplished (25□, 55đ and 32ª , 57□) the remaining respondents from each variables were neutral.

Concerning relationships of nurses and midwifes with co-workers in a comparison way between functional and BPR method of organization as determinant factors 67(54.9%) were feels good and 55(45.1%) were feels bad also after BPR implementation similarly 68(55.7%), 54(44.3%) were claimed good and bad respectively. Which includes between nurses (97□, 6đ and 97ª, 8□), nurse-physicians (72□, 25đ and 75ª, 18□), and nurse-supervisors (77□, 18đ and 78ª, 26□) the remaining respondents from each variables were neutral

Lastly, the analysis of use of skills and abilities by nurses and midwifes in a comparison way between functional and BPR method of organization as determinant factors 70(57.4%) were feels bad and 52(42.6%) were feels good also after BPR implementation similar result was found as 67(54.9%), 55(45.1%) were complained bad and good respectively. It includes autonomy (53□, 24ⓓ and 56ª, 23□), opportunity to learn new skills (40□, 49ⓓ and 31ª, 55□), and supports for additional training and further education (19□, 81ⓓ and 28ª, 69□) the remaining respondents from each variables were neutral.

N: B □Good before BPR, ⓓ Bad before BPR, ª Good after BPR, □ Bad after BPR.

5.2. Study of determinant factors of nurses and midwives job satisfaction between functional and business processing re-engineering method of organization.

A p value of <5% (0.05) is taken to decide if an independent variable has a significant association with the dependent variable which is level of job satisfaction using binary logistic regression analysis. Thus, a p value of <0.05 is taken as a statistically significant association and those with p value of 0.05 and above are considered as statistically non-significant.

As it is shown in table 4, based on the value of adjusted odds ratio and its P-value which is < 5%(0.05), general working conditions, relationships with co-workers, use of skills and abilities, and payment and promotion potentials had a significant association on nurses and midwifes overall job satisfaction both during functional as well business processing re-engineering methods of organization. All the other factors studied such as age, educational status, gender, marital status, place of work/dept, work experience, interests of nurses and midwife to learn in the coming five years, did not have a significant association with overall job satisfaction.

Table 4: Influence of some independent variables on nurses and midwifes level of job satisfaction among Hawassa university teaching hospitals, SNNPR, Ethiopia, 2010/11.

Indpt. variables	LOS		Crude odds ratio	Adjusted odds ratio	
Edu. Status	**Satisfied**	**Dissatisfied**	Crude OR(95%CI)	Adjusted OR(95%CI)	P-value
Diploma	64*, 60**	45*, 49**	**0.13(0.03- 0.6)*, 6.74(1.43-31.83)****	0.540*,51.787**	0.672*, 0.208**
BSc	2*, 2**	11*, 11**	1.00		
Gender					
Female	51*, 49**	40*, 42**	1.00		
Male	15*, 13**	16*, 18**	0.74(0.33-1.67)*,0.619(0.27-1.41)**		
Marital status					
Single	23*, 19**	28*, 32**	0.54(0.26-1.11)*, **0.39(0.18-0.81)****	0.142**	0.172**
Married	43*, 43**	28*, 28**	**1.00**		
Place of Work /ward					
M/ward	7*, 7**	9*, 9**	1.00		
S/ward	21*, 18**	14*, 17**	1.93(0.58-6.38)*, 1.36(0.41-4.47)**		
Pediatrics	12*, 9**	3*, 6**	**5.14(1.03-25.60)*,**1.93(0.46-8.05)**	1.749*	0.708*
Obs/gyn ward	13*, 14**	9*, 8**	1.86(0.51-6.84)*,2.25(0.604-8.38)**		
OPD	13*, 14**	21*, 20**	0.79(0.24-2.658)*, 0.9(0.27-2.99) **		
Experience					
2-6yrs	45*, 40**	33*, 38**	1.00		
7-11yrs	12*, 12**	13*, 13**	0.68(0.27-1.67)*, 0.88(0.36-2.16)**		
≥12yrs	9*, 10**	10*, 9**	0.66(0.24-1.80)*, 1.06(0.39-2.88)**		

Interests to learn in the coming Five year. Nursing	37*, 33**	24*, 28**	1.00		
Health officer	19*, 17**	16*, 18**	0.77(0.33-1.79)*, 0.80(0.35-1.84)**		
Others(social & basic science)	10*, 12**	16*, 14**	0.41(0.16-1.04)*, 0.73(0.29-1.83)**		
General working conditions Good	53*, 59**	7*, 11**	**28.54(10.5-77.4)*, 87(23.1-331.7)****	48.11*, 983.1**	**0.004*, 0.02****
Bad	13*, 3**	49*, 49**	1.00		
Payment and promotion potential Good	50*, 48**	6*, 9**	**26.04(9.42- 72)*,19.43 (7.7- 49.0)****	515.8*, 23.4**	**0.002*, 0.024****
Bad	16*, 14**	50*, 51**	1.00		
Relationships with coworkers Good	52*, 46**	15*, 22**	**10.15(4.4-23.4)*, 5.0(2.3-10.8)****	216.7*, 13.7**	**0.002*, 0.016****
Bad	14*, 16**	41*, 38**	1.00		
Use of skills and abilities Good	44*, 47**	8*, 8**	**12(4.85-29.71)*, 20.37(7.9-52.37)****	19.1*, 481.3**	**0.007*, 0.005****
Bad	22*, 15**	48*, 52**	1.00		

N: B □ LOS (level of satisfaction) * Results before BPR, ** Results after BPR

5.3. Results of Focus Group Discussion

Two focus group discussions (FGD) were conducted with nurses and midwife working in Hawassa university referral hospital and Yrgalem zonal hospitals separately. Each group consisted of ten discussants.

The major theme of the FGD was assessing nurses and midwives overall job satisfaction during functional and business processing re-engineering method of organization in a comparative way. A FGD guide was developed that contained a list of questions aimed at explaining the purpose of the study. One moderators assisted by reporters freely conducted the focus group discussion.

Participants of the FGD first discussed and exchange ideas on concepts of job satisfaction. Most of the respondents explained that increasing nurses job satisfaction is very crucial because in any given health institution especially hospitals majority of health workers or care givers are nurses so we are a great man power to support the health service system of the country as a back bone.

As one of the discussants stated that:

"patient satisfaction highly depends on quality of nursing service for this increasing the level of nurses job satisfaction is very important because satisfied nurse is highly productive, creative and committed to overcome different responsibility with interest."

Participants were asked how they evaluate their overall job satisfaction during functional and business processing reengineering method of organization in their hospitals in a comparative way. Most of the respondents sated that both systems has its own good and bad sides especially as one of the discussants claimed and majority were agreed that:

“Even though the old system has many advantages, there were great problems that harm the positive side of the system but surprisingly those problems are continued even in a new system of organization”.

The other participants complained as follows: “The old system was better than the new one because this new system (BPR) forced us to spent very tighten working hours without balanced salary”

Having the above responses in to consideration, for majority BPR implementation couldn’t bring a better or observable change on nurses and midwives level of job satisfaction than before.

Also, discussants were asked about determinant factors that causes job satisfaction /dissatisfaction both before and after BPR implementation in a comparative way.

They all were agreed about the presence of certain factors that can either positively or negatively affect the level of satisfaction.

One of the participants as a strong side said that:

“After BPR implementation there is no rotation as what was before, really this is good for nurses because it helps us to increase our knowledge and skills in a specific unit since we stay for very long period of time unless there is a tangible reason”

Another nurse also strengthens the above ideas. As she said:

“This way of assignment is also important in order to attend different training because when there is training it will forward just for respected case team that specifically concerned about even though there is a problem of selection specially if the training has incentive. But, before

BPR all nurses was invited for requirements weather directly concerns or not. For example if the training is directly concerns those medical ward nurses, obs/gyn and surgical ward nurses also have a chance to attend the training."

But one nurse was not agreed with the above mentioned opinion. As he said

"Absence of rotation is not good because it restricts our knowledge and skills." having thus different opinion , most of them stated that after BPR implementation the working schedule becomes more attractable that allows us to deal several family and social lives and increases our nurse to nurse, doctors and supervisors relationships. But, there is tightness especially those who worked in outpatient department and medical-surgical ward without balanced salary according to the principle of BPR.

Benefits and recognition was the other point of discussion. Both Yrgalem and Hawassa hospital nurses complain as there were no enough and adequate benefits that enhances their productivity

Most of the discussants complained as follows:

"Regarding benefits and recognition there is no change. It is the same both before as well after BPR implementation especially those working in Hawassa referral hospital they said only 20% discount is available which is immoral than Yrgalem. As they said for physician there is a transport service at lunch time but not for nurses. But in Yrgalem transport is available both for physicians as well nurses fairly. Concerning recognition they all agreed as there is no any responsible body to recognize and praise for their good deeds as for physicians."

Another nurses said: "Whatever nurses do good deeds the physicians will praise but in case if the physicians made a mistake nurses are the front line person to be criticized."

Concerning support of nurses and midwives to earn additional training and further education to upgrade their knowledge and skills, majority of the participants agreed as no change before as well after BPR implementation. For inside training no problem every nurses will invite to participate the training but for outside training which has incentive most of the time the selection procedure is not clear, fair and justice which is really very irritant.

Lastly, participation in decision making process concerning hospital affairs was part of our discussions as they almost all agreed that it is not satisfactory because the metron and many physicians were the only invited individuals.

Finally, what should be done as a solution to enhance job satisfaction by reducing, if possible totally correcting, thus irritant factors was part of the discussion. They forwarded almost the following similar interest:

- Transport service should be corrected fairly as it was before BPR (Hawassa ref. hospital nurses).
- Salary should be balanced as per the principles of BPR appropriately which can fit the current work load and life conditions.
- The health insurance should be increase up to 100% discount and the selection criteria for training should be clear, rotational and correct based on our performance appraisal.
- The ongoing planned activities of establishing a committee in order to praise or award nurse for their good deeds should be implemented.
- There should be a fair distribution of justice in irrespective of race, ethnicity and religion.
- The hospital administers should design a good working environment that involves nurses and midwifes on decision making process.

6. Discussion

Job satisfaction is dynamic and can vary according to individual characteristics, expectations, style of management, changes to policy and individual lifestyle choices (1).

Regarding the overall level of job satisfaction, studies in 2010 conducted in Addis Ababa governmental hospital revealed that only 112 (37%) of nurses were "satisfied" with their job whereas, the majority 188(63%) of the respondents were "dissatisfied" with their job (25). But in this studies, there is no a large gap between satisfied and dissatisfied as compared with the previous one, from the total 122 respondents during functional method of organization 66(54.1%) were satisfied, 56(45.9%) dissatisfied but after BPR implementation the difference that was exit before becomes almost equal level 62(50.8%) were satisfied, 60(49.2%) dissatisfied. This may be because of multiple effects of the new method of organization as well nurses working in regional and zonal town may not have analogous characteristics, expectations, and lifestyle choices than those working in the capital town of a given town.

Based on this study in the analysis of socio demographic characteristic of the nurses and midwives work experience, age, educational Status, gender, marital status, ethnicity, Place of work (ward), Work experience and their future interests to learn in the coming five years had not found a significant association for overall level job satisfaction with odds ratio p value of >0.05 in both methods of organization. Although studies conducted in Addis Ababa governmental hospital in 2010 revealed as there was a statistically significant association between working experience in the field of nursing (25). Also, a research had done in America shows a significant association between age or working experience in the field of nursing and job satisfaction (15).

Concerning the effects of educational level on job satisfaction, it has been conflicting. Some studies have found a positive association with job satisfaction and others a negative association. In this studies there is no statistically significant association between educational level and job satisfaction even though the frequency distribution showed as majority of BSc holders were dissatisfied both during functional as well business processing re-engineering method of organization. Similarly, findings from survey of NHS nurses conducted in America showed that higher level qualifications impacted negatively on job satisfaction (1). This inverse relationship may be associated not only as level of education raises the workers expectations also becomes raise that subsequently will not met but also problems of job allocation that deserve their educational qualifications.

As a report conducted through ANA's National Database of Nursing Quality Indicators (NDNQI) based on input from 76,000 RNs from hospitals across the country shows that levels of job satisfaction for each category varied somewhat, depending on the unit in which the nurses worked. For example, maternal-newborn and pediatric RNs reported higher levels of job enjoyment than their counterparts working in medical-surgical, critical care, and emergency rooms (9). But in this study the unit in which the nurses worked had no statistically significant association even though majority of nurses worked in outpatient department complains dissatisfaction as what frequency distribution and focus group discussions revealed because of inadequate man power allocation; this may harm nurse - patient relationships and in the long run end up with burn out and turnover.

As the result of this studies showed that from the total 122 study units the majority 81(66.4%) were prefer to change their sector of organization within the next five years either in to NGO,

abroad or other governmental hospitals while only 41(33.6%) reported that they would most likely still be in their current hospitals in five years time. This may be because of lack good administration exercise like faire distribution of justice, absence of strong affiliation of hospital administration in including nurses and midwives to participate in decision making process, presence of weak support for additional training and education as opposite done for physicians, inadequate benefits, and recognition for works accomplished by nurses and midwives, inappropriate payment and so on which is statistically significant both during functional as well after business processing re-engineering methods of organization implementation.

A cross-sectional survey of professional nurses conducted throughout South Africa using a pre-tested and self-administered questionnaire revealed that from the total of 569 professional nurses participated in the study. 34.8 % indicated an intention to change their sector of employment within the next five years while only 30.2 % reported that they would most likely still be in their current positions as professional nurses in five years time. These are tendencies that can harm the profession as a whole on the long run by increasing burn out, turn over…etc as the result of this studies conducted in Hawassa university teaching hospitals showed 61(50.0%) nursing, 35(28.7%) health officer (HO) and the rest 26(21.3%) prefer different social and natural science to learn if conditions meet in the coming five years. If situation continued in this manner, it might cause shortage of professional nurses in Ethiopia as what currently is the ongoing problems in the United States and several other developed nations such as the UK, Austria, Norway, Japan, and Australia (11, 8).Therefore, it should receive special managerial attention by finding out possible strategies to strengthen predictors of intention to remain employed and upgrading their knowledge in nursing like employment practices that reflect moral integrity, incorporate clear communication systems, maximize employee involvement in decision-making,

cohesive working relationships (cooperation with medical staff), appropriateness of the system for nursing, promote praise and recognition, and establish a shared vision and goals since the synthesized findings from 48 studies, according to Blegen said, shows that certain variables such as recognition, financial rewards, promotional opportunities, payment, distributive justice, supports for advancing knowledge are most strongly associated with job satisfaction (1).

The focus group discussion held in Hawassa university teaching hospitals for the purpose of this study revealed as there is a high work load because of inadequate man power allocation specially those working in outpatient department (OPD) and to some extent in medical-surgical ward relatively than working in counter parts obs/gyne and pediatrics ward. This situation may cause burnout as a cumulative effect which might harm the profession and nurse-patient relationships at long. Similar results were found by Aiken et al. (2002), reported nurses with the highest nurse-to-patient ratio experience burnout and dissatisfaction more than twice as much as those with lower ratios. The researchers noted that 43% of nurses who reported high levels of burnout and dissatisfaction intended to leave their jobs within a year (12).

The study also revealed presence of good relationships between nurse and medical staff next to nurse to nurse; this situation has a great contribution for job satisfaction which is statistically significant (P=0.002,0.024) in both methods of organizations. Research conducted in hospitals of the Isfahan University of Medical Sciences Iran, revealed similar results; majority of participants (65%) had excellent job Satisfaction considering their current ($p < 0.011$) (20).

Benefits are very important for government as well private health workers in order to stay /keep them in their current working position but what the quantitative as well focus group discussion of this study revealed that around 82(67.2%), 80(65.6%) were dissatisfied of them the majority was

found very dissatisfied both during functional and business processing reengineering method of organization respectively because of lack of access to many non compensatory benefits. This and other different factors like inappropriate salary, lack of recognition, opportunity for promotion which is included under payment and promotion potentials. On contrary, in United States nurses have access to many non compensatory benefits, more than four-fifths (84%) of nurses surveyed reported that benefits were somewhat or very important to staying in their current position (14). Also, a study conducted in Belgian general care hospitals payment is found the most important dimension of nurses' job satisfaction (19).

Also, the study conducted (2010) on nurses working in Addis Ababa governmental hospitals shows a negative and strong correlation was observed with "salary" and found statistically significant and association with job satisfaction (24).

7. Strengths and Limitation of the study

7.1. Strengths:

- Pre-tested data was used
- Data quality assurance mechanism was used
- The study will give baseline for further studies
- It is currently a government concern

7.2. Limitation

- Because of its political sensitivity unwillingness may be encounter
- Lack of as many of such similar studies for the purpose of comparison
- The informant may forward miss leading answers because of political memberships

8. Conclusions and Recommendations

8.1. Conclusions

Job satisfaction is an important component of nurses' lives that can impact on patient safety, staff morale, productivity and performance, quality of care, retention and turnover, commitment to the organization and the profession with additional replacement costs (e.g. agency staff) and further attempts to hire and orientate new staff(1)**.** So, understanding what motivates workers and how this impact on performance has always interested organizations, managers and different theories have sought to answer this question (1).

Based on different synthesized research outcomes 19 variables was selected to study job satisfaction of nurses and midwives of Hawassa university teaching hospitals during functional and BPR method of organization in a comparative way. According to the finding of this study as BPR implementation couldn't bring a significant change in increasing level of job satisfaction as supposed on nurses and midwives.

The other important finding of this study, there are some changes in which certain variables were considered as a contribution for dissatisfaction but due to implementation of business processing reengineering method of organization those variables switched for satisfaction like work load, suit of educational qualification with their current job only 29% of the respondents were complain as the current working position was suit their educational qualification in old system but after implementation of new system (BPR) the situation is changed to 50%.

Finally, majority of study subjects were planned to leave their current working hospitals also the study forecasted a high turnover rate of experienced nurses in the future if conditions proceed as

it is. The reason was screen out through focus group discussion and lack of good administration exercise concerning nursing issues not only from the hospital administrator but also the federal government was found as a core reasons for why most nurses are not interesting to upgrade their knowledge in nursing science.

8.2. Recommendations: - Based on the analysis and the conclusion from the study, the following recommendations are forwarded.

- ✓ As evidences shows satisfied employees tend to be more productive, creative, and committed to their employers so appropriate actions should be taken to use the advantages of nurses in order to achieve the millennium development goal.
- ✓ Appropriate managerial measurements should be made to make the working environment more conducive including at federal level in order to not lose experienced nurses by reducing the staff turnover.
- ✓ Salary should be corrected appropriately with work load and current living situation.
- ✓ Good administration exercise that establishes fair distribution of justice and participant of nurses in decision making process in each and every level of health service system of the country should be implemented in order to achieve the goal of BPR method of organization.
- ✓ A committee should be set to praise nurses and midwives good deed at the hospital as well federal level
- ✓ There should be a complete health, life…etc insurance as evidences showed benefits are somewhat or very important to staying employers in their current position.
- ✓ Since nurses job satisfaction and patient hospital satisfaction/outcome/ is highly related issues, so studies on patient satisfaction in a comparative way between functional and BPR method of organization will be important in order to see the other side/view/of BPR.

9. Annexes

Annex I References

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Annex II

Addis Ababa University College of health science centralized School of Nursing Graduate Study Program.

Information Sheet

Good morning/Good afternoon!

Here, I the undersigned, at Addis Ababa University College of health science centralized School of Nursing Graduate Study Program; currently I will be undertaking research on a topic entitled as A comparative study of nurses' and midwifes job satisfaction and its determinant between functional and business processing re-engineering (BPR) method of organization in Hawassa University teaching hospitals, 2010/2011 Ethiopia.

For this study, you will be selected as a participant and before getting your informed consent/permission of participation, you need to know all necessary information related to the study. Thus, this information will be detailed as follows.

Purpose of the study: The purpose of the study is to compare nurses' and midwifes job satisfaction and its determinant between functional and business processing re-engineering (BPR) method of organization in Hawassa University teaching hospitals, 2010/2011 Ethiopia.

Participants to be included: All full time nurse workers in medical, surgical, pediatrics, obstetrics/gynecology and outpatient department selected via lottery method who work three months before and after BPR program implementation in the respected hospitals.

Procedure for selection of participants: lottery method in each unit

Benefits and risks of the study

Risks: The study will be carried out simply by rating of already prepared structured questions. The procedure does not bear any to physical or psychological trauma.

Benefits: For your participation in the study no payment will be granted or has no any special privilege to you. On the other hand, participating in the study and giving your information to questions asked will have great input in efforts made at improving nurse's job satisfaction

Confidentiality: All information you give will be kept confidential and won't be accessible to any third party. Your name won't be registered on the question sheet so that you will not be identified.

Consent: Your participation in the study will be totally based on your willingness. You have the right not to participate from the beginning, or you may stop participation at any time after starting the participation.

Finally, I would like to thank you for your participation

The principal investigator

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Sign Date

Annex III □□□ □□□ □□□□□□ □□ □□□□ □□□ □□□□□ □□□ □/□□ □□□□ □□□ □□□ □□□

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Annex IV

Addis Ababa University College of health science centralized School of Nursing Graduate Study Program

Consent Sheet

Good morning/Good afternoon!

Here, I the undersigned, at Addis Ababa University College of health science centralized Scholl of Nursing Graduate Study Program; currently I will be undertaking research on a topic entitled as A comparative study of nurses' and midwifes job satisfaction and its determinant between functional and business processing re-engineering (BPR) method of organization in Hawassa University teaching hospitals, 2010/2011 Ethiopia.

To Dear participant

I am going to ask you few questions about your willingness to participate in the study. After you read it the following statement please give your responses as either agree or disagree to participant in the study. You may confirm your agreement or disagreement by either giving your signed or verbal consent in the respective space give below.

I the invited participant, given that all relevant information concerning the purpose of this particular study, participants to be included, the procedure of selection of the study participants, the study procedure, benefits and risks of the study, consent and confidentiality read and explained to me, I decided to agree/or disagree to participate in the respective study mentioned above.

Agree responses: Disagree responses

Sign---------- sign----------

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The principal investigator Sign Date

Annex V

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Annex VI English version Questionnaire

JOB SATISFACTION QUESTIONNAIRE

By complete a job satisfaction questionnaire; you'll be able to identify those aspects of your current job that are rewarding as well as those that contribute to dissatisfaction. The results will help you to clarify the aspects of a job that most directly contribute to your career satisfaction. You can also use this exercise to predict how you might respond to potential occupations and the degree of satisfaction that a potential job is likely to provide.

PART I

INSTRUCTION: CIRCLE OR FILL IN THE BLANK SPACE APPROPRIATELY.

GENERAL INFORMATION

1) Age: ……..
2) Religion: ……..

3) Gender……...

4) Marital status: (a) married (b) single (c) divorced (d) windowed

5) Ethnicity: ……

6) Educational status…….

7) How many years have you practiced as a nurse? …….

8) Place of work (ward/department) …….

9) How do you evaluate the overall satisfaction with your job before BPR implementation?

(a) Very bad (b) Bad

(c) Neutral (d) Good (e) Very good

10). How do you evaluate the overall satisfaction with your job after BPR implementation?

(a) Very bad (b) Bad

(c) Neutral (d) Good (e) Very good

11) Where do you planned to work in the coming five year?_____

12) What do you planned to learn in the coming five year?_____

PART II

RATING YOUR JOB SATISFACTION

1	2	3	4	5
Very bad	**Bad**	**Neutral**	**Good**	**Very good**

Instruction: There are 18 statements about job satisfaction and each statement has five (5) alternatives with five point scale ranging from 1 (Very dissatisfied) to 5 (Very satisfied). Read each item carefully and for each question, **please put a number** that best expresses your feelings.

If you feel that your job gives you **more than you expected**, choose "**very good**"

If you feel that your job gives you **what you expected**, choose "**good**"

If you **can't make up your mind** whether or not your job gives you **what you expected**, choose "**Neutral**" (neither satisfied nor dissatisfied)

If you feel that your job gives you **less than you expected**, choose "**Bad**"

If you feel that your job gives you **much less you expected**, choose "**very bad**"

Be frank and honest: Give a true picture of your feelings about your present job.

Variables related to job satisfaction	Rating before BPR implementation	Rating after BPR implementation
General working condition		
Hours worked each week/work lode		
Flexibility in scheduling		
Location of hospital and transport service by institution		
Amount of paid vacation time/sick leave offered		
Job suits your educational qualification?		
Distributive justice		
Participation in decision making.		
Payment and promotion potential		
Salary and amount of work you do		
Opportunities for Promotion		
Job Security		
Benefits (Health insurance, life insurance, etc.)		
Recognition for work accomplished		
Work relationships		
Relationships with your co-workers (Nurses or Doctors)		
Relationship(s) with your supervisor(s)		
Relationships with your subordinates/lesser		

rank of you		
Use of skills and abilities		
Opportunity to utilize your skills and talents/autonomy		
Opportunity to learn new skills		
Support for additional training and education		

Annex VII Addis Ababa University, College of Medicine Centralized school of Nursing

Questions for focus group discussion

Group Name:

Date of discussion_____ Time_____

Location:

Facilitator Name:

Group leader name:

Note-taker(s) name(s):

Number of participants

Discussion guides to study comparatively of nurses' and midwifes job satisfaction and its determinant between functional and business processing re-engineering (BPR) method of organization in Hawassa University teaching hospitals, 2010/2011 Ethiopia.

Introduction

Introduce the aim of the study

Warm up discussion

Have you heard about job satisfaction?

What job satisfaction mean for you?

How do evaluate your overall job satisfaction before BPR implementation in your hospital?

How do evaluate your overall job satisfaction after BPR implementation in your hospital?

What do you believe of the determinant factors that cause job satisfaction /dissatisfaction before BPR implementation in your hospital?

What do you think of the determinant factors that cause job satisfaction/ dissatisfaction after BPR implementation in your hospital?

Do you trust that BPR method of organization brings a positive change on nurses' job satisfaction?

What do you suppose should be done to increase job satisfaction?

Annex VIII

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Questions related to job satisfaction/□□□ □□□□□ /□□□□ □□□□□□ □□□□□	**Rating before BPR implementation/** □BPR □□□□□ □□□ □□□□□ □□□ □□□□ □□□ □□□□□ □□	**Rating after BPR implementation/** □BPR □□□□□ □□□ □□□□ □□□ □□□□ □□□ □□□□□ □□
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