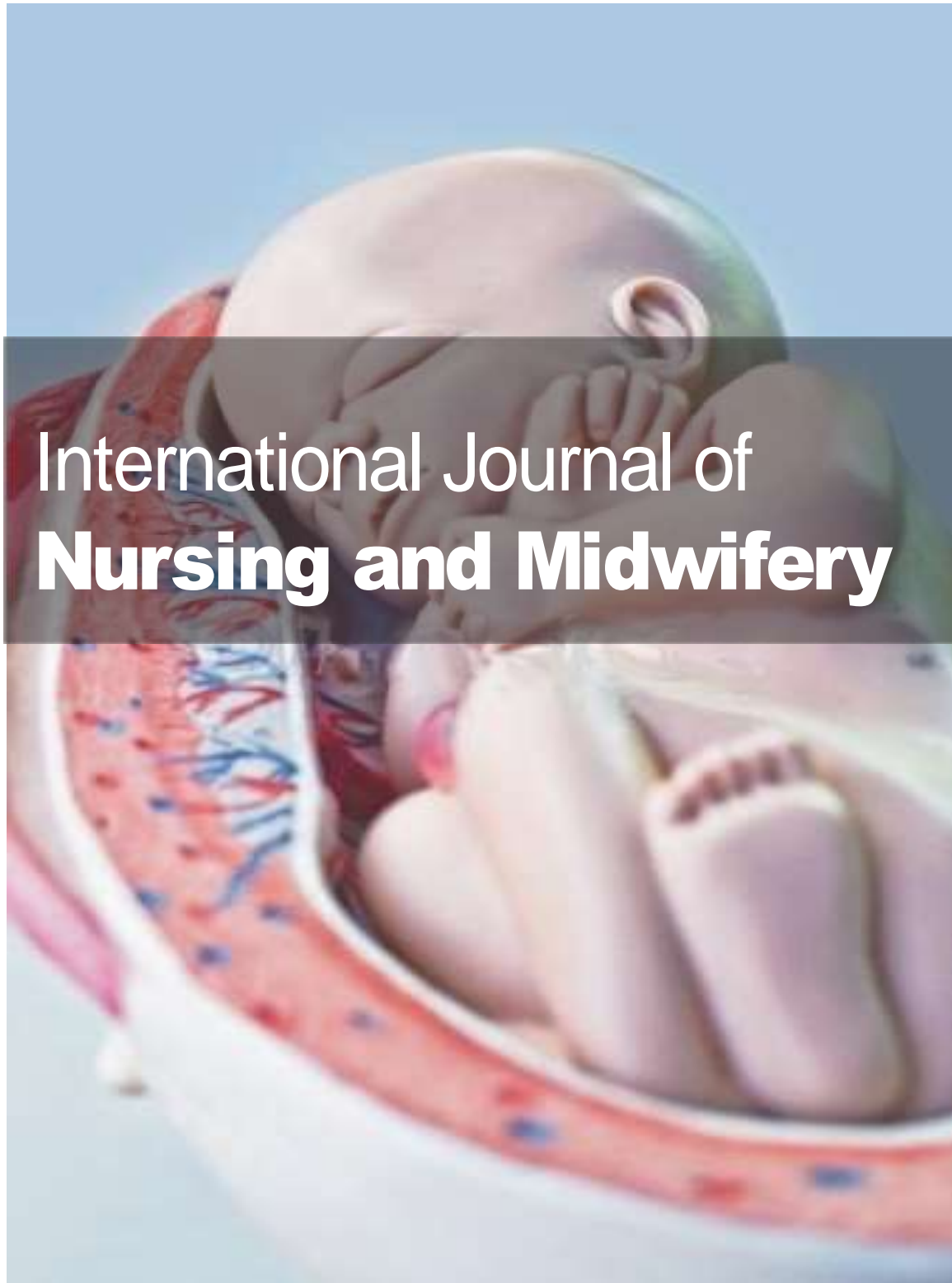


OPEN ACCESS



International Journal of **Nursing and Midwifery**

May 2018
ISSN 2141-2456
DOI: 10.5897/IJNM
www.academicjournals.org

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International Journal of Nursing and Midwifery

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Full Length Research Paper

Children's perspectives of their psychosocial well-being in Tanzanian orphanages

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Received 10 November, 2017; Accepted 15 March, 2018

The aim of this study was to explore factors affecting the wellbeing of institutionalized orphaned children in Dar es Salaam, Tanzania. A descriptive qualitative study was used to collect data from Tanzanian orphaned children receiving orphanage care. Purposive sampling was employed to select 10 orphanage centers from which 123 orphaned children were recruited. A semi-structured interview guide relevant to the study objectives was developed from the literature and was used to guide the focus group interviews. Data was analysed by way of thematic analysis. There were 76 male and 47 female orphans; orphans without one or both parents were 87 and 36 respectively. Seventy-eight orphans were in primary school and 45 orphans were in secondary education. Study findings revealed that the orphanages provided a higher degree of material support compared to psychosocial support services, such as emotional or counselling assistance. The orphanage schedule needs to include time for caregivers and children to talk about their feelings regarding the type services provided at their center, in particular educational services.

Key words: Support, psychosocial wellbeing, orphanages, Tanzania, children.

INTRODUCTION

The psychosocial support children receive under orphanage care is acknowledged to profoundly influence behaviour, especially in children's early years (Golding et al., 2006). Child care in Tanzania takes place in various environments that include different configurations of families, including child care institutions. Due to the HIV epidemic in many countries including Tanzania, increasing numbers of children in Sub-Saharan African (SSA) countries are being taken care of in orphanages (Rukundo and Daniel, 2016). These orphanages have in

turn become overwhelmed by the number of children in need of psychosocial support and care

The United Nations Programme on HIV/AIDS (UNAIDS) (2014) highlighted HIV and AIDS children orphaned, in various types of institutional care settings owned by governmental agencies, non-governmental organizations, academic institutions, the private sector, civil society and faith-based organizations. Most of these institutions have been providing different types of care and support to children under resource-

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scarce conditions, due to insufficient capital and human resources. In view of this, most institutional care settings, particularly in SSA, have failed to address orphaned children's psychosocial support and care (UNAIDS, 2014; Regional Psychosocial Support Initiatives [REPSSI], 2016).

Psychosocial support is categorized as instrumental support, emotional support, and informational support that includes appraisal support (REPSSI, 2016; Schenk et al., 2010). Van Dyk (2007) and Evangelou et al. (2009), elaborated that psychosocial well-being occurs when internal and external needs of children are met and recipients become physically, mentally and socially healthy.

When children lose their parents, and enter orphanage care, they suffer a series of bereavements (Atwine et al., 2005; Evangelou et al., 2009; Nyawasha and Chipunza, 2012). Larose et al. (2005), Beek and Schofield (2004) Van Dyk (2007) and REPSSI (2016) established that social conditions related to orphanhood influence the psychological well-being of children with regard to their need to make new and rapid social and psychological adjustments. Orphaned children are affected psychologically related to the trauma and associated hardships they experience.

Researchers (Stroebe et al., 2016) have determined that bereavement is distressing and has a diverse effect on their affective, cognitive, social, behavioural and physical status with physiological and somatic manifestations. Larose et al. (2005) and Boutin (2006) contend that the majority of children being cared for in institutions experience intense psychological problems due to their new status. One of these problems is poor performance in schools. Orphaned children may drop out of school due to feeling uncomfortable and unwanted among peer groups because of stigma attached to the status of orphanhood (Ainsworth et al., 2005). Moreover, Yang et al. (2011), Kamali et al. (1996) and Golding et al. (2006), learnt that when orphaned children are placed in institution and move away from their fellow siblings and friends, they develop anger and depression, which in turn lowers their concentration in school and hence results in poor performance.

Some children are placed in the orphanages for other reasons such as an economic crisis in the family or where one parent dies and the remaining parent cannot support the child economically. Also, children abandoned by their families and street children also comprise the orphanage population. UNICEF (2010) divides children accommodated in the orphanages into four mutually exclusive categories for analysis purposes. First, there are those known as maternal orphans who include children under the age of 18 whose biological mothers, have died. Second, there are paternal orphans who include children under the age of 18 whose biological fathers, have died. Third, there are those known as

double orphans, who include children under the age of 18 whose biological mothers and fathers have both died. Further, there are those orphans due to AIDS, that have lost one or both their guardians including close relatives and foster parents. It is evident that orphans in the orphanages come from diverse social, economic and cultural backgrounds and have different psychosocial backgrounds that influence their future development as they grow without parental care (Foster, 2000).

In Tanzania orphaned children suffer various psychosocial problems in the orphanages due to various reasons that thus far have not been clearly addressed by empirical studies (UNICEF, 2010). Due to little attention given to psychosocial care and support to children and vulnerable children by most orphanage institutions in Africa in general (Rukundo and Daniel, 2016); and Tanzania in particular, the psycho-social needs of children are crucial to investigate.

METHODOLOGY

This study used a qualitative exploratory design with focus group discussion (FGD).

Study area

The research was conducted in Dar-es-Salaam Region, Tanzania and enrolled participants from a purposive sample of orphanages located in the Kinondoni, Temeke and Ilala Districts. Ten orphanages out of 34 orphanages in the Dar-es-Salaam Region participated in the study.

Ethical approval

A formal ethics application was submitted through the University of Dares Salaam Ethics Research Committee for review and approval. The research permission was granted by the University of Dares Salaam and by the Municipal Councils of Kinondoni, Temeke and Ilala. For each orphanage, permission to talk to eight to ten children from 10 of the total sample of 34 orphanages was further sought from each orphanage director. The caregivers were then informed of the purpose of the study and voluntarily accepted and assisted in identifying the required respondents. Prior to data collection, the researcher met with all the directors, caregivers and the orphaned children and responded to questions relating to the study, objectives, procedures, issues of confidentiality, the importance of voluntary participation and the need for individual informed consent. The directors, as legally appointed guardians, signed the consent form for the children. The recruited children were told about the general purpose of the study and their responses were anonymous.

Research instruments

Semi-structured interview guides prepared in Kiswahili dialect (local dialect in Tanzania) were used to generate data. The interview guides were based on the literature review of global and regional evidence to date and drew on the children's perspectives of their well-being in the orphanage care and support. The interviews also sought demographic information.

Table 1. Demographic characteristics of the children involved in FGD N- 123.

Group	Causes and status of orphans	Sex		Age group		Educational level	
		M	F	12-14	15-17	Primary	Secondary
Orphaned from AIDS	36	12	8	14	6	14	6
Orphaned from unknown cause	40	11	9	11	9	11	9
Orphaned from others causes	47	13	8	15	7	15	7
Paternal orphan	57	15	6	13	8	13	8
Maternal orphan	30	11	10	15	5	15	5
Orphan lost both biological parents	36	14	6	10	10	10	10

Focus group discussion approach

A bilingual Kiswahili-English linguist assisted in reading the translated versions to check for clarity of the guides for the FGDs, before the study. After the initial translation, the same linguist translated the versions back to English to check the accuracy of the translations.

One hundred twenty-three children participated in the FGD. The children were purposively selected from seven orphanages and divided into 14 groups (two groups from each orphanage). Each group comprised of eight to 10 members and separated by gender into age groups of 12 to 14 years and 15 to 17 years. Only seven of the sampled 10 orphanages had the required age group of the children at the time of data collection. The sessions began with the researcher thanking the participants for their acceptance to participate in the study; and a brief introduction of the research purpose. This was followed by the researcher reading out the written informed consent so that each participant was well-informed before he/she could make a decision to participate in the FGDs or withdraw. It was stressed that participation in the study was entirely voluntary. The participants were encouraged to be open and honest in discussions. They were also asked to give their personal opinions, comments, seek clarifications or say anything related to the discussion. The researcher then carefully outlined the norms applicable to such group discussions and assured them that privacy and confidentiality will be observed regarding the contents of the discussion. It was also emphasized that any experience revealed or anything said by a group member represented his/her personal opinion.

One ethical challenge was sharing sensitive information among the group members. If not carefully handled, the anticipated sharing of such information could cause tension and hinder group members from revealing their experiences. The researcher encouraged values of self-confidence, respect for one another, and safeguarding one another's secrets while emphasizing the importance of sharing experiences among group members.

All group sessions were tape-recorded, and the researcher acted as the discussion leader. All details of the process were noted and kept on record. On average, each FGD took about two hours. At the conclusion of each session, the participants were invited to ask questions and acknowledged for their co-operation.

Data analysis

The audio recordings were firstly transcribed to text in Kiswahili, and then were translated into English to facilitate the analysis. The transcriptions and translations were verified against the audio-recordings for accuracy and adjustment.

The data was managed through thematic analysis. The analysis involved interpretation of the data through listening to recordings, multiple readings of the translated transcripts, and stepwise construction of codes and categories. The categorization included identification of the themes.

RESULTS

Results from the FGD are presented in two tables: demographic characteristics and categories of the analytical processes.

Demographic characteristics of the orphans

The findings indicated that the majority of children had no proper record of their original homes. The children involved in the FGD were categorized according to the cause, type of orphanhood, age group educational level, paternal and maternal orphans and orphans who lost both parents (Table 1).

Analysis

Participants' views were processed under thematic analysis described by Braun and Clarke (2006), and used descriptions from participants, codes, category and the emergent themes (Table 2).

Instrumental support

All children stated that they were provided with the institutional support that addressed their basic needs. Some of the children reported that they could not get these services prior to joining the orphanage. A 13 year old boy reported the following:

"Here in the orphanage we are provided with food, shelter, clothes and education while before joining the orphanage we could hardly get a meal in a day; so we are happy about it."

Table 2. Descriptions from participants, codes, category and emerged themes.

Data items	Codes	Category	Sub- theme	Themes
Here in the orphanage we are provided with food, shelter, clothes and education while before joining the orphanage we could hardly get a meal in a day; so we are happy about it.	Food, shelter, clothes	Basic needs	Provided with food, shelter, clothes and education	Provisional of instrumental support
We are sometimes supported Emotionally in terms of being provided with affection, trust, protection and attachment from the caregivers. "There are times we fail to see the care givers because when we come back from school, we find they have gone home."	Affection, trust, protection	Attachment from the caregivers	Affection, empathy, trust and protection experienced by children in the orphanage	Emotional support

Some children commented that they were happy with the orphanage life, because they were provided with basic necessities and educational facilities, which they could not access in their homes.

A 16-year-old boy observed:

"When I was living with my aunt, I needed education and my aunt was not able to give me daily meal and education, she had no money for paying fees for me, and could not afford to buy me uniforms, shoes, socks, exercise books and other educational supplies inclusive of the basic needs. My attendance in school was interrupted when I had to work, so as to get money for food, school facilities and tuition."

In comparison to other needs, the basic needs (instrumental support) were more visible than emotional, informational needs; providers were credited for these services and recognized for the provision of this assistance within their community.

Emotional support

Children's views on emotional support services in the orphanage indicated that they were cared for and they were partly protected, but lacked strong attachment to the caregivers as they *"could not get affection from the caregiver when they needed to see one"*. The caregiver child ratios 2: 25 (age 8-12 years) 2:35 (age 13+ years) recommended by the Tanzania National Guidelines were very rarely observed.

The children reported feeling protected due to caregivers' restrictions to visit potentially dangerous places, such as the dormitory rooms of the opposite sex, kitchens, playing far from the orphanage compounds, and interacting with strangers. These feelings were expressed as follows:

A girl aged 15 years observed:

"Small children are not allowed to go to the kitchen because they will get burnt by fire, also not allowed to play around the water well" (3fgd).

Some of the children indicated that the caregivers tried their best to protect them, but it was difficult for them to monitor each child because of the insufficient number of caregivers. Therefore, it can be concluded that the majority of children in the orphanages received partial protection.

With regard to attachment and affection of children to caregivers, findings from the FGS indicated that there was little attachment to their caregivers; the caregivers had too many responsibilities. About three-fifths of the children reported that they were not provided with any sense of attachment and affection due to insufficient and inadequate caregivers and lack of training on child handling skills.

A boy aged 12 years said:

"There are times we fail to see the caregivers because when we come back from school, we find they have gone home, and if we need someone to tell our problems, we have to wait until the following day"(3fgd).

Education

The Education offered to children in the orphanage involved informational support where children were oriented to the orphanage activities including caring for the young ones. Informational support helps the children to adjust well in the orphanage environment and prepares them for the future.

A boy aged 14 years from orphanage "H" was quoted saying: "Here we are taught different activities like cooking and washing. The caregivers do it by assigning different tasks to us and by demonstrating the domestic chores to us before we carry them out". (6 fgd).

A girl aged 13 years from orphanage "F" observed:

“Every day I use to keep my young ones clean. In this orphanage everyone is allocated to take care of the young ones by washing their clothes, feeding and preventing them from hurting themselves or from conflicts when playing” (6th fgd).

Some children reported being provided with health education especially when they needed to address developmental changes in their bodies. A girl aged 16 years from orphanage “H” supported:

“In this orphanage female caregivers teach us how to take care of our body cleanliness; they call us when they get free time but not always, in order to educate us on different ways to stay away from male manipulations. The head of the orphanage talks to us and tells us not to accept anything from men with cars or accepting gifts from men in general” (6th fgd).

Therefore, the findings of the study indicate that informational support was used as means of exposing the orphaned children to basic life skills in the orphanage. Orphaned children confirmed that knowledge about life basic skills was highly important for their life in the orphanage and in the communities they would join after reaching 18 years of age.

Apart from performing daily orphanage activities, children were also expected to make some decisions on issues affecting them.

A girl aged 15 years said: *“Sometimes, very rarely the head of the orphanage asks for our views on how we want the food to be, or when the clothes are brought by the donors, he asks us to choose the ones we want”* (6th fgd).

The children’s views on participation in decision-making indicated that very few children participated in matters concerning their lives both in the orphanage and outside. They did not discuss what to wear, the kind of food to eat, the schools to go to, or orphanage activity schedules. Overall, very few children actually participated in any decision making on orphanage activities.

Appraisal support

Appraisal support refers to rewarding children or showing appreciation regarding their performance of the orphanage activities. This was thought to be useful for children’s self-evaluation purposes. The process referred to the children’s perspective of their caregivers’ ability to motivate them using positive and negative reinforcement to shape and modify the children’s behaviours.

Specifically, some children were appreciated for their good manners, strong performance in school as well as duties of the orphanage. One girl aged 15 years from orphanage “F” said:

“Once you show good manners by following the

orphanage rules and regulations, you are given presents like biscuits, pen, exercise books and other school facilities. One day I cleaned the room of the head of the orphanage and I was given a box of biscuits” (6th fgd).

A boy aged 17 years from orphanage “B” reported: *“For example me, when I got good results in form four examinations, I was rewarded a very nice shirt and a trouser. I was very happy”*(4 fgd). Caregivers focused mainly on the observable behaviour and activity outcomes.

DISCUSSION

Instrumental support involved the provision of tangible basic needs that directly help children cope with orphanage life. These children had no access to education services before coming to the orphanages. This situation was validated by reports from Schenk et al. (2010) and REPPSI (2016) which indicated that in most cases, care and support provided prior to institutional assignment was limited to physical needs. This situation forced many of the children to join the orphanages for educational assistance. This is consistent with reports by UNICEF (2010) and UNAIDS (2014), which stated that generally, children face difficulties with getting access to education.

Emotional support involved the expression of empathy, love, trust and caring. Children were provided with some affection and emotional support from the caregivers; however, this was inconsistent and insufficient to form affectionate bonds for the children. Golding et al. (2006) reported that regardless of the quality of institutional care, ‘normal’ child growth and development requires the opportunity for frequent and consistent one-to-one interaction with a caregiver or guardian. Thus, the main reason for the unreliable attachment and affection observed among children in this study was the high child-caregiver ratio and multiple responsibilities.

During the study, informational support (education) was seen to be provided through learning basic life skills. These life skills referred to the social knowledge required to manage the orphanage environment for the children to live smoothly with each other and their care givers. This is confirmed by Boutin (2006), McLeod et al. (2001) who reported that in orphanages with few caregivers, children were left alone to instruct each other in cooking activities, cleanliness, washing and caring for the young ones.

The ability to participate in decision making enables the children to develop transparency, makes it easy to read their behaviour and to note their satisfaction and dissatisfaction with the orphanage environment. In many orphanages the children were told to implement orders from the heads of the orphanages and the caregivers. This is not the same as the child’s right to be given

freedom to make decisions on matters pertaining to their choices (REPSSI, 2016). In these orphanages, children lacked a sense of belonging, lacked identity and did not feel at home when in the orphanages. Some children attested to hating the orphanage environment, and wished to return to their homes. This finding does not support the Tanzanian Law of the Child Act 21, (2009) which suggests that children should make decisions related to their lives, and development should be 'child-centered'.

Appraisal support involved the provision of information that was thought to be useful for children's self-evaluation purposes. This type of praise has been widely accepted as a popular tool in the development and maintenance of the children's academic achievement, motivation, behaviours, and strategies acting as a way of encouraging or discouraging certain behaviours among children in the orphanage. This is contrary to what was found by REPSSI (2016) who reported that there were orphanages in which many caregivers were not aware of the importance of praising a child's performance inside and outside the orphanage.

CONCLUSION AND RECOMMENDATIONS

Generally, the study showed that the psycho-social support provided in Tanzanian orphanages was present but imbalanced. This imbalance was caused by the lack of insufficient and poorly trained personnel. However, the study recommends that children in the Tanzanian orphanages be given free access to education and provided books and transport to and from schools. This recommendation also includes providing special identity cards to these children, that will give them access to these services, and empowering them to make autonomous decisions.

The orphanage schedule should also include the time in which caregivers and children talk and air their feelings. This will help them increase personal attachment and enable the children to express their feelings freely without fear, and enable them to raise issues and concerns to the caregivers.

Lastly, orphanages rules and decisions should consider involving children's input by soliciting their views as a way of promoting their decision-making capabilities. These changes can make their life more comfortable and create a sense of belonging to the orphanages.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

ACKNOWLEDGEMENTS

The authors appreciate the support from the supervisors of the PhD programme, Professor P. Kumuzora and

Professor A. Mbise from the University of Dar es Salaam, Tanzania where this document was derived.

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Full Length Research Paper

Evidence based nursing practice and associated factors among nurses working in Jimma zone public hospitals, Southwest Ethiopia

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Received 24 November, 2017; Accepted 7 May, 2018

In spite of all the various programs and strategies to promote the use of research finding, there is still gap between theory and practice. A number of studies from various countries have reported that nurses' experience of evidence-based practice is low. In Ethiopia, there is an information gap on the extent of evidence based nursing practice and its associated factors. The study aims to assess the implementation of evidence based nursing practice and associated factors among nurses in Jimma zone public hospitals. Institution based cross-sectional study was conducted from March 1-30/2015. A total of 333 sampled nurses for quantitative and 8 in-depth interview of key informants were involved in the study. Semi-structured questionnaire was adapted from funk's BARRIER scale and Friedman's test. Pretest was done on 17 nurses of Bedele hospital. Multivariable linear regression was used to determine factors of evidence based nursing practice. Of 333 distributed questionnaires, 302 were completed, giving 90.6% response rate. Of 302 participants, 245 were involved in EBP activities different levels. About 45 (18.4%) had implemented evidence based practice to low level, 42% had implemented evidence based practice to medium level and 39.6% of the respondents had implemented evidence based practice to high level. The first greatest perceived barrier was setting characteristic. Knowledge about research evidence was positively associated with implementation of evidence based nursing practice. Similarly, place of graduation was positively associated with implementation of evidence based nursing practice. Small number of participants had implemented EPB frequently. Evidence-based nursing practice was positively associated with knowledge of research, place where respondents graduated, and the availability of information resources. Organizational factors were found to be the greatest perceived barrier. Intervention programs on awareness creation, training, resource provision, and curriculum issues to improve implementation of evidence based nursing practice by stakeholders are recommended.

Key words: Evidence based practice, nursing practice, research utilization Ethiopia.

INTRODUCTION

Evidence based practice (EBP) is the use of best research finding (evidence) to answer a burning clinical question together with one's own clinical expertise

generated from outcome management or quality improvement projects and patient preference and values. Researchers generate new knowledge through rigorous

research (external evidence) and EBP provides clinicians the tools to translate the evidence into clinical practice and integrate it with internal evidence to improve the quality of health care and patient outcomes (Melnyk and Fineout-Overholt, 2004).

Its basic principles are that practical decision made should be based on research studies and that these research studies are selected and interpreted according to some specific norms and characteristic for EBP. EBP utilizes the most up to date methods of providing care, which have been proven through appraisal of high quality studies and statistically significant research finding (Wikipedia, 2014).

Health care that is evidence-based and conducted in a caring context leads to better clinical decision and patient outcomes. Gaining knowledge and skill in the EBP process provides nurses and other clinicians the tools needed to take ownership of their practice. There are five sequential steps to the EBP process. Step 1: Asking the clinical questions in the Patient/Population, Intervention/Issue of interest, Comparison, Outcome and Time frame (PICOT) format to get more effective evidence. Step 2: Searching for the best evidence to select. Step 3: Critically appraising the evidence. Step 4: Addressing the sufficiency of the evidence to implement or not to implement, and evaluating the outcome of the evidence implementation (Fineout-overholt et al., 2005).

In spite of all the programs and strategies to promote the use of research finding, there is still a gap between theory and practice (Penagiari, 2008). And there are many practices that are being implemented in healthcare that have no or little evidence to support their use (e.g. double-checking of pediatric medication, routine assessment of vital signs every 2 or 4 h in hospitalized patients (Melnyk and Fineout-Overholt, 2004).

Difference in outcomes, health inequalities, and poorly performing health service continue to present a challenge to all nurses. Poorly informed decision-making is one of the main reasons to service can fail to be delivered in an optimal way and can also contribute variation in practice which makes less efficient, ineffective, and inequitable. Half of the world's death could be prevented with simple cost effective interventions; not enough is known about how to make these more widely available to the people who need them. Changing practice is difficult, wastes time and can have unexpected outcome. However, change can be exciting and motivating. Understanding and planning how to take evidence into practice, to action knowledge, is important. This area because it is so critical, has been the subject of an increasing amount of research itself (International Council of Nurses, 2012).

All over the world, there is a growing appreciation of the

importance and difficulty of evidence based nursing practice (EBNP). As part of international efforts to facilitate the dissemination of EBNP, research has focused on identifying barriers to utilization of EBNP. Identifying such barriers can help international efforts to develop strategies to overcome these. One of these barriers was found to be lacking the knowledge and skills to evaluate research finding (Eizenberg, 2011).

A number of studies from various countries have reported that nurses practice EBP and distinct EBP activities to low extent (Bostrom et al., 2013).

Researchers have argued that daily practice in nursing care is influenced more by tradition, intuition, and experiences and less by scientific research. Reviews in literature focus on the difficulty that exists trying to apply research finding into practice. The major barriers to the utilization of research finding were found to be the work organization (setting), the adopter (nurse), and presentation of research findings (Eizenberg, 2011).

Even though evidence based health care has been shown to be an efficient and much needed practice worldwide, developing countries have difficulties in accessibility of existing evidence and medical resources than in developed countries.

In Africa, EBP implementation is late as compared to developed world. Incorporating evidence-based health care (EBHC) into the African context means setting priorities, developing evidence summaries, and guidelines and implementing research finding relevant for African countries to support health care for all. Contextualizing evidence relates to several issues, including the lack of evidence available for an African setting. The effectiveness of an intervention in Africa may be different from that found in studies elsewhere because of factors such as: later presentation, co-infections, malnutrition, higher levels of self-medication and use of traditional, reduced level of resources, including human resource for basic health care and political instability. In addition, effective interventions, as determined by many systematic reviews, may not be available or affordable in most African settings. This means that Africa needs valid African-specific research and that authors of systematic reviews should consider this by avoiding overgeneralization when making conclusion (Forland et al., 2013).

In Ethiopia, the federal ministry of health lacks skilled health professionals who could help to synthesize evidence for policy-making. Moreover, at all levels of the health systems there is little culture or tradition of trusting or using evidence (Gautham et al., 2014).

Also in Ethiopia as well as in the study area there is a gap of shortage of research articles published concerning

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EBP utilization. This study seeks to explore level of EBP implementation and will give information concerning factors, which hinder implementation of EBP among nurses working in Jimma zone public hospitals.

METHODOLOGY

Study setting and design

Institution based cross-sectional study was conducted from in four public hospitals found in Jimma zone, Oromia Regional State from March 1-30, 2015. Jimma is the town of Jimma zone, which is one of the Oromia Regional States, which is 352 km away from Addis Ababa, the capital city of Ethiopia, in southwestern part of the country.

Study populations

Three hundred and two nurses who were present at work in Jimma Zone public hospitals.

Sample size and sampling procedures

The sample size was determined based on the single population proportion formula and an assumption of 50% was taken, since level of evidence based practice utilization is not known. Assuming a 10% non-response rate, a total sample size of 333 nurses were required.

Overall sample was proportionally allocated to each hospital and systematic sampling was used to select participants of the study. All sampled nurses working in four public hospitals of Jimma zone during data collection period were included in the study. Those nurses who were having work experience less than 6 months were excluded.

Data collection

The data was collected using pre-tested semi-structured questionnaire adapted version of Funk's BARRIERS scale to measure nurse's perceived barrier of research utilization and Friedman's test was used to measure knowledge of respondents (Eizenberg, 2011).

This questionnaire included the 29-item barrier scale to research utilization. This scale asked the nurses to rate the extent to which they supposed each item as barrier to nurse's use of research evidence to change or improve their practice.

The questionnaire was prepared in English language. The first part of the questionnaire contained items, which measure socio-demographic characteristic of the respondents. The second part of the questionnaire contained questions about awareness and knowledge of evidence based nursing practice. The third part of the questionnaire contained questions about the evidence practice activities. The fourth part of the questionnaire contained questions about source of information and availability of information resources. Part five of the questionnaire contained the 'BARRIER' scale, which measured the nurse's perception on barriers of research evidence utilization. The 'BARRIER' scale was divided into four parts (subscales): characteristic of the adopter (nurse's value, skills, and awareness), characteristic of the organization (setting, barriers and limitation), characteristic of the innovation (qualities of the research) and characteristic of the communication (presentation and accessibility). The subscales Cronbatch's alpha values were 0.85 for presentation scale, 0.79 for nurse subscale, 0.82 for setting

subscale and 0.86 for research (innovation) subscale.

Study variables: Dependent variables implementation of evidence based practice

The scale that measured implementation of EBP in this study includes seven items with minimum score of 7 and maximum score of 35. Moreover, the score on implementation of evidence based nursing practice (EBNP) was transformed into Tertian classification. The higher the score the higher the implementation of EBNP. The independent variables include: socio-demographic factors (age, sex, marital status, qualification, position in the organization and level of hospital), organizational factors (administration support, colleague support, time availability, and incentive for staff), characteristic of individual (communication character, awareness on best evidences, knowledge on research evidence, salary, place of graduation), and characteristic of research evidence (way of presentation, understandability of research report, availability, and accessibility of research reports).

Statistical analysis

The data were carefully entered into Epidata V3.1, edited and cleaned for inconsistencies and missing values. Data was analyzed using SPSS version 16.0. Descriptive statistic was used to summarize data. Bivariate and multivariable linear regression was used to assess the association between dependent variable and independent variables. The variable with p-value less than 0.05 was taken as having significant association.

Ethical considerations

Ethical clearance was obtained from ethical committee of JU (IRB), College of Public Health and Medical Science. A formal letter, from the College of Public Health and Medical Science of Jimma University was obtained and submitted to Jimma zone health office and concerned bodies to obtain their cooperation. The purpose of the study was explained to the participants at the time of data collection and written consent was obtained from the participants to confirm whether they will participate or not. The participants of the study were informed that the participation was voluntary based. Confidentiality of the response was ensured throughout the study.

RESULTS

Socioeconomic and demographic characteristics

Out of 302 respondents, 57% were male. The mean age was 27 years ($SD \pm 6.154$), minimum age is 19 and maximum age is 58 years old. Majority were single 178 (58.9%). About 177 (58.6%) of the respondents were diploma holders. About 145 (48.0%) of the respondents were graduate from government higher institution and the rest were graduated from private institutions. About 274 (90.7) were in staff nurses and the rest 28 (9.3%) were in different managerial position (Table 1).

Awareness and knowledge about evidence-based practice

When the respondents were asked how familiar they

Table 1. Distribution of respondents by socio-demographics characteristic, in Jimma zone public hospitals, Jimma, southwest Ethiopia, 2015.

Characteristics		N	%
Sex	Male	172	57.0
	Female	130	43.0
Qualification	Diploma	177	58.6
	B.Sc. nurse	121	40.1
	Masters	4	1.3
Marital status	Ever Married	124	41.1
	Single	178	58.9
working hospital	JUSH	253	83.8
	Shenen-Gibe	16	5.3
	Limmu-Genet	19	6.3
	Agaro	14	4.6
Place of graduation	Government institutions/universities	145	48.0
	Private institutions/universities	157	52.0
Position in the hospital	Staff Nurses position	274	90.7
	Managerial position	28	9.3

were with concept, about 190 (62.9%) were familiar with the concept of EBP. When the respondents asked knowledge questions concerning research concept and research terms about 82 (27.2%) of respondents scored low level, about 78 (25.8%) of respondents scored medium level and about 92 (30.5%) of respondents scored high level (based on Tertian classification).

Source of information and availability of the information resource

Concerning the source of information and availability of the information resource, when asked how they evaluate the availability of information resource in the hospital, only 85 (28.1%) said that online resource were available and 76 (25.2%) said that print material were available. Major source of information that respondents usually find evidence for their nursing care practice was internet 118 (39.1%).

When asked how often they look for information from the given sources, about 135 (44.6%) were using reference book, about 40 (13.2%) were using research report, about 36 (11.9%) were using journal article and about 41 (13.5%) were using hospital library on the regular bases.

Level evidence based practice activity

From the total 302 participants, 245 (81.1%) had involved in different EBP activities to different level (from seldom

to often). Total score was computed for individuals total score in EBP and Tertian classification was done on the total score of EBP activity measurements. Accordingly, about 45 (18.4%) of the respondents implemented EBP to low level (sometimes), about 103 (42%) of the respondents implemented EBP to medium level and about 97 (39.6%) of respondents implemented EBP to high level (Table 2).

Perceived barriers to research utilization

The top 5 perceived barriers reported in this study were (1) 'physician doesn't not cooperate with implementation of new evidences'; (2) 'the nurse is isolated from knowledgeable colleagues with whom to discuss new findings'; (3) 'there is no incentive for clinical practice development'; (4) 'the nurse feels the benefit of changing practice is minimal'; and (5) there is resistance to make change in the work setting. Since 60% of this perceived barrier is from setting origin, the largest perceived barrier was organizational factors (mean =26.60, \pm 7.08).

Factors associated with implementation of evidence based nursing practice

Factors associated with implementation of EBNP were assessed and the significant association was found between knowledge about EBP and implementation of EBP. Knowledge about EBP was positively associated with EBNP implementation ($\beta=0.76$, $P=0.008$). For a unit

Table 2. Distribution of respondents by involvement in EBP activities, Jimma zone public hospitals, Jimma, Southwestern Ethiopia, 2015.

Activities	Never		Seldom		Occasionally		Regularly		Often	
	N	%	N	%	N	%	N	%	N	%
Asked clinical question r	119	39.4	24	7.9	80	26.5	54	17.9	25	8.3
Look for(searched) evidence	157	52	45	15	79	26	8	2.6	13	4.3
Read any evidence	107	35.4	29	9.6	68	22.5	71	23.5	27	8.9
Critically appraised evidence	122	40.4	40	13.2	53	17.5	57	18.9	30	9.9
Used current evidence	122	40.4	35	11.6	58	19.2	60	19.9	27	8.9
Evaluated the outcome	117	38.7	43	14.2	61	20.2	50	16.6	31	10.4
Teaching new evidence to others	120	39.7	50	16.6	62	20.5	44	14.6	26	8.6

Table 3. Multivariable linear regression final model.

Model	Unstandardized Coefficients		P	95% Confidence Interval for B	
	B	Std. Error		Lower Bound	Upper Bound
Knowledge score	0.762	0.285	0.008**	0.201	1.322
Sex					
Male	0.123	0.901	0.892	-1.652	1.897
Female (Ref.)					
Place of graduation					
Public	2.270	1.137	0.047*	0.031	4.510
Private (Ref.)					
Familiarity to EBP	1.124	1.104	0.310	-1.051	3.298
nurse subscale	0.090	0.074	0.227	-0.056	0.236
Level Nurse Education	0.528	1.165	0.651	-1.768	2.823
Availability of resource	0.675	0.244	0.006**	0.195	1.156

Maximum VIF = 1.882, adjusted R² = 0.084.

increase in knowledge about research, implementation of EBNP increases by 0.762. Similarly, place where the respondent graduated was positively associated with evidence based practice ($\beta=2.270$, $P=0.047$). Graduating from public universities increases evidence based practice by 2.270. Another positively associated variable is extent of resources availability such as internet services (online resource), print materials and other information resources (such knowledgeable colleagues) ($\beta =0.67$, $P= 0.006$). Availability of information resource such internet access increases the utilization of EBP by 0.67 (Table 3).

DISCUSSION

Participants in this study were involved in each activity of EBP with different levels of involvement, but for simplicity the score was summed up and transformed into Tertian classification. Accordingly, about 45 (18.4%) of the respondents had implemented EBP to low level (sometimes), about 103 (34.1%) of the respondents had

implemented EBP to medium level (usually) and 97 (32.1%) of the respondents implemented EBP to high level (always).

This finding was consistent with the study done in Sweden by Bostrom et al, 2013 in which (60%), approximately similar level of EBP implementation was reported (19% asked clinical questions and performed searches in data bases, 56% used information sources, 31% appraised the literature, 30% participated in practice development, and 34% participated in evaluating clinical practice to high extent) (9, 13). Also finding from this study was analogous with the study conducted in South Africa, in which 35.6, 32.9, and 31.5% use EBP frequently, moderately and rarely, respectively. Even though in this study small numbers of respondents were frequently involved in EBP about (18.4 %), the finding is similar with finding from South Africa.

On the other hand the finding from this study is higher than the study done in Tikur Anbesa hospital in Addis Ababa, in which 57.6% participants applied EBP. Of them, 64 (52.8%), 38 (31.4%) and 19 (15.7%) applied EBP sometime, usually and always respectively (Hadgu

et al., 2015).

This could be due the sample size difference. In this study, the sample is somewhat higher than the study done in Tikur Anbesa hospital. The other possible justification may be in Jimma University specialized hospital; there is nursing care standardization program that may increase nurses' application of new research evidence in their nursing care practice.

Concerning perceived barriers to research utilization from the top 5 reported barriers, 3 were setting related barriers, that is, about 60% were from organizational factors. Therefore, the greatest perceived factor was organizational factors (mean=26.60, SD±7.08). This finding was similar with studies done in USA, China, Iran, Maldives, German, and Australia. In addition, organizational factor has been consistently reported as greatest perceived factor. On the other hand, when we compare top 5 perceived barriers to research utilization with seven other studies except this study, most of the studies reported that 'insufficient time to read and implement new idea' was the most reported barrier (Eizenberg, 2011; Uysal et al., 2010; Heydari et al., 2014; Umarani, 2014; Dalheim et al., 2012; Gravel et al., 2006; Retsas, 2000; Schoonover, 2006; Shifaza et al., 2014).

In this study, knowledge about EBP was positively associated with EBP implementation ($\beta=0.76$, $P=0.008$). This finding was similar in pattern with study done in USA where nurses who reported having greater knowledge of EBP also reported a greater extent of evidence-based care ($r=0.42$, $p < 0.0001$) (Melnyk et al., 2004). Similarly, the study done in Iran is in line with this finding where nurses who knew the definition of evidence-based nursing were more likely to utilize research findings in clinical practice than those who did not know (Pearson $\chi^2 = 23.912$, $P = 0.02$) (Heydari et al., 2014).

Similarly, in our country, one study that was conducted in Tikur Anbesa hospital reported that those nurses who have knowledge were 3 times more likely to practice EBP than those who do not have knowledge (Hadgu et al., 2015).

IMPLICATION FOR PRACTICE, POLICY AND NURSING PROGRAMS

In this study, small number of nurses applied EBP to high level (frequent basis). This means most of the nurse in Jimma zone public hospital uses traditional way of practice, that means depend on the expert opinion and school training, which may be out to date way of practice, which delays the latest way of patient care approach, which enhances the progress of patient outcomes. Since the use of evidence-based practice delivers the positive patient care outcomes nurse in Jimma zone public hospitals should implement EBP in their nursing care practice to positive patient care outcomes. It is very much important to consider nursing care policy and nursing curriculum issues so that curriculum planners should

strictly emphasize on EBP philosophy during program preparation. Nursing care policy should empower nurse so that nurses autonomously implement EBP during nursing care practice. Other area that should be considered is educational preparation for nurse particularly in private institutions or colleges. Private nursing college should comply all the issue incorporated in Ethiopia nursing education programs so that graduate from private institution be competent in implementation of research findings in the nursing care practice.

LIMITATION OF THE STUDY

Since this study was based on self-report, the response on the EBP practice may be inflated due to social desirability bias of respondents.

CONCLUSIONS AND RECOMMENDATIONS

This study concluded that small number of nurses applied EBP to high level. Organizational factors were found to be the greatest perceived barrier. The implementation of evidence-based practice was associated with knowledge on research, place of graduation, and the availability of information resources. The level of perception and level of EBP implementation was not associated.

There has to be intervention program to facilitate the implementation of evidence in nursing practice by the respective stakeholders (Ethiopian Federal Ministry of Health, Oromia Regional Health Bureau, educators of nursing education and hospital administration of Jimma zone public hospitals).

Training should be conducted for nurses on implementation of evidence-based practice by Jimma zone public hospitals in collaboration with NGOs, Ethiopian Federal Ministry of Health and Oromia Regional Health Bureau.

Resources necessary to implement evidence based nursing practice should be provide by hospital administration of Jimma zone public hospitals in collaboration with Ethiopian Federal Ministry of Health, Oromia Regional Health Bureau and other NGOs

Intervention programs concerning organizational communication with issue on evidence based practice implementation should be done together with nurses and physician to create supportive staff by hospital administration of Jimma zone public hospitals.

Since there is gap of awareness on evidence based nursing practice curriculum planners should take into consideration to include the principle of evidence based nursing practice in Ethiopian nursing education programs especially in the undergraduate nursing education curriculum. Private nursing colleges should incorporate principles of evidence based practice in their nursing education programs so that graduates from private nursing college should be competent.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

ACKNOWLEDGEMENTS

The authors would like to thank the respondents who participated in the study. They are also grateful to Jimma University for funding the study.

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