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Knowledge, Attitudes and Practices of Postoperative Pain Assessment and Management among Health Care Practitioners in Cape Coast Metropolis, Ghana

Article by Richard Sarfo-Walters
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Abstract

Postoperative patients experience moderates to severe pain within first 48 hours and this minimizes comfort. This study aims to establish level of nurses’ knowledge, attitudes and practices of postoperative pain assessment and management in Cape Coast. A descriptive quantitative, cross-sectional research design was used. A purposive sampling technique was used to select a sample of 200 nurse anaesthetists and registered nurses from Cape Coast Teaching Hospital and Cape Coast Metropolitan Hospital, Central Region, Ghana. The respondents’ knowledge, attitudes and practices of postoperative pain management were evaluated using opened and closed-ended questionnaires. The findings of the study revealed, more than half of the respondents stated that postoperative pain is best told by the patients themselves but significant number 34% stated health care practitioners can best tell patient pain intensity. Less than half of the respondents observed the effect of pain medication on patients. Almost half of the respondents agreed patients would be addicted when they are given opioids analgesics. It was concluded that there were adequate knowledge of postoperative pain assessment and management among respondents but there is knowledge gap with regards to who best tell if patient experiences pain or not. Knowledge and practices of postoperative pain assessment and management were statistically significantly related and there is a strong relationship between knowledge and practice of postoperative pain assessment management. It was recommended that pain assessment and management should be done before and after administration of analgesia. Pain medications such as opioids should be given as and when necessary.

Keywords: Post operation, Quality pain control, Health care practitioners, Assessment and management, Opioids analgesic, KAP of pain.

Introduction

The purpose of the study was to establish level of nurses’ knowledge, attitudes and practices of postoperative pain assessment and management in Cape Coast. Effective pain management is essential in the postoperative period to enhance comfort, prevent unnecessary distress and minimize potential complication. Pain is an inevitable common experience for patients after surgery because of tissue trauma (Klopfenstein, Hermann, Mamie, Van Gessel & Forster, 2001). Postoperative patients experience moderates to severe pain in the 1st 48 hours and this minimizes their comfort. If inadequately assessed and managed, postoperative pain leads to negative physiological and psychological experiences which hinder proper assessment and management of postoperative pain by health care providers, especially nurses.

Effective postoperative pain (POP) assessment and management is greatly associated with adequate knowledge of the nurse. Awareness of the perceived barriers (attitudes and practices) has also a great contribution to effective management of the pain. Lack of adequate knowledge of pain management and barriers can greatly compromise patients’ wellbeing after the surgery. Pain is often described in the literature as a subjective complaint that acts as a warning sign (Hartrick, 2004). A high level of pain is expected immediately after surgery. It has been reported that there are inadequate pain management practices after surgery. Despite the
advancement of pain management modalities, many patients continue to suffer unnecessarily (Gordon, et al., 2005; Horner, Hanson, Wood, Silver & Reynolds, 2005; Sloman, Wruble, Rosen, & Rom, 2007). This might be due to lack of nurses’ knowledge or related to their negative attitudes in dealing with the patients’ complaints of pain. Numerous studies have described nurses’ lack of knowledge to manage pain effectively, despite this advancement.

Nurses have the responsibility of adequately managing patients' post-operative pain. Effective pain management is essential in the post-operative period to ensure that patients do not experience unnecessary distress or suffering and to minimize potential complications. Post-operative pain management strategies should focus on combining pharmacological management and comfort measures to ensure maximum pain relief for each patient (Mackintosh-Franklin, 2007). As nurses who take care of patients around the clock, the postoperative patients expect that nurses will be able to relieve their pain. In practice, nurses explain the cause of pain to patient and tell them to ask for medicines to relieve their pain when they have pain. The nurses also administer pain medications according to the doctors’ treatment plan. Nurses take care of these patients to further relieve their pain by paying attention to the pain the patients are suffering from, asking about their pain, assessing pain intensity and providing comfort such as by positioning the patients.

There is an emerging body of knowledge directed towards understanding postoperative pain (POP) among patients who have undergone surgical experience. This knowledge is mainly concerned with the examinations of the patient’s responses toward pain management services. Nevertheless, limited research has been conducted in the area of studying nurses’ experiences in working with patients having POP in Ghana. Assessment from the accounts of the patients: including asking them about intensity, location, timing, and previous pain. The patients’ accounts are an important factor in pain assessment based on the assumption that only the patients know the accurate quantity and amount of pain (Jackson, 1995).

Management of postoperative pain reliefs suffering and leads to earlier mobilization, shortened hospital stays, reduced hospital costs, and increased patient satisfaction (Watcha, Issiou, Klein, & White, 2003). Pain control regimens should not be standardized; rather, they are tailored to the needs of the individual patient, taking into account medical, psychological, and physical condition; age; level of fear or anxiety; surgical procedure; personal preference; and response to agents given. The major goal in the management of postoperative pain is minimizing the dose of medications to lessen side effects while still providing adequate analgesia. This goal is best accomplished with multimodal and pre-emptive analgesia (Watcha et al., 2003). A multidisciplinary team approach (e.g., acute pain service) is useful for formulating a plan for pain relief, particularly in complicated patients, such as those who have undergone extensive surgery, chronically use narcotics, or have medical co-morbidities that could increase their risk of analgesia-related complications or side effects.

**Effects of pain on activities of daily living**

The body’s reactions to pain lead to physiopsychological sufferings, especially among patients who do not receive pain management or patients whose pain management is not sufficient (Taylor, Kuttler, Parks & Milton, 1998). Sufferings from pain arouse the patients’ emotion, leading to irritability, agitation, mental discomfort, uneasiness, and lack of desire to socialize with others. As a result, their interpersonal relationships with other persons can be affected. Furthermore, reactions to pain increase the work of all organs, while some parts of the body tissues lack oxygen, so the stored energy will be expended. This can bring about exhaustion and suffering, and it can prevent the patients from doing activities of daily living and make them suffer from disturbed sleep.

Good, Stanton, Grass, Anderson, Makii and Geras (2000) carried out a study on postoperative gynecological pain during the first two days after surgery. They found that the sample had worst pain as follows: on the first postoperative day, they had severe pain and on the second postoperative day, they had moderate-severe pain. As for least pain, the sample had mild pain on both the first and the second postoperative days. As regards effects of pain, 30% of the patients reported that the pain disturbed their sleep in the first two postoperative nights, and 65% reported that they had difficulty sleeping during the first
postoperative night. In addition, it was found that pain increased when the patients moved after the operation, but pain decreased when the patients took a rest. Also, about nine percent of the patients used relaxation techniques to release pain. Thus, it could be concluded that moderate to severe pain cannot be relieved with medicines alone.

Based on the study of Good et al., (2000) it can be summarized that hysterectomy patients have severe pain in the first postoperative day which affects their sleep.

Postoperative pain assessment

1. Assessment from the accounts of the patients: including asking them about intensity, location, timing, and previous pain. The patients’ accounts are an important factor in pain assessment based on the assumption that only the patients know the accurate quantity and amount of pain (Jackson, 1989).

1.1 The intensity of pain can be divided into three levels as follows:

1.1.1 Mild pain is found in about 30% of all patients. The intensity of pain is rather low, and it lasts one to two days. This level of pain can be decreased by using non-narcotic oral medications.

1.1.2 Moderate pain, like mild pain, can be found in approximately 30% of the patients. This type of pain has severe intensity and lasts a long time. To decrease this type of pain, weak opioids must be used.

1.1.3 Severe pain is found in about 40% of the patients. The level of pain intensity may be so high that only oral pain medication may not work, and other pain management methods such as regional anaesthesia may be required (Jackson, 1989).

There are two types of pain assessment: single-dimension scales and multiple-dimension scales.

Single –dimension assessment includes a straight line, faces, colours. Straight line is the assessments of intensity of pain in a straight line that have been used by various researchers in Thailand include the Visual Analogue Scale, Simple Descriptive Scale, Graphic Rating Scale, and Numeric Rating Scale.

Visual Analogue Scale: VAS is a straight line 10 centimeters in length. There are words underneath the line at both ends to indicate ‘no pain at one end and pain as bad as it could possibly be at the other.

| No pain | Pain as bad as it could possibly be |

Figure 1. The visual analogue scale.

Simple Descriptive Scale (SDS): is a straight line with controlling numbers and words to indicate the level of pain, ranging from 0 to 5, and from ‘no pain, to ‘mild pain,’ ‘moderate amount of pain, ‘severe pain, ‘very severe pain,’ and worst possible pain.’

A. Simple Descriptive Pain scale

Figure 2: The Simple Descriptive Pain Scale

Graphic Rating Scale (GRS): is a straight line with words that are used as indicators of the levels of pain the patients are experiencing, form ‘no pain, ‘to ‘mild,’ moderate, ‘severe, ‘and ‘pain as bad as it could possibly be. Numerical Rating Scale (NRS): is a straight line with the numbers on the top ranging from 0,1,2,3,4,5,6,7,8,9, to 10, and with the verbal interpretation on bottom. Number 0 means ‘no pain’, 5 means ‘moderate pain.

Figure 3. The Numerical Rating Scale

Colours; Stewart pain – colour scale is a strip of continuous colours, ranging from white, to yellow, to orange, to red, to violet, and to black. There are words at both ends of the strip to indicate no pain and the highest level of pain possible.

Face: Wong-Baker faces pain rating scale is a series of drawings of faces, starting from a smiling from a smiling fact and ending with a crying face. The accompanying numbers range from 0 to 10, indicating no pain at all to the highest level of pain.
Limitations

The limitations of this study were the use of convenient sampling technique to select the respondents instead of the use of probability sampling technique to give respondents equal chance. To enhance the accuracy of the results by increasing the number of respondents by using more than three hospitals in order to get larger population size.

Achievements

I am a Registered General Nurse (RGN), Certified Registered Anaesthetist (CRA). I also hold Bachelor of Science Nursing (BSc. Nursing) and Master of Nursing (MN). I am a lecturer at the School of Nursing and Midwifery, University of Cape Coast, Ghana. I am a member of Medical and Dental Council of Ghana, Nursing and Midwifery Council of Ghana and Ghana Association of Certified Registered Anaesthetist.

Methods

The study design for this work was quantitative descriptive and a cross-sectional study. The study was conducted in the two major hospitals in the Central Region of Ghana. Cape Coast Teaching Hospital (CCTH) and Cape Coast Metropolitan Hospital (CCMH). These are the only two hospitals in the region that do almost all manner of surgical procedures. Both hospitals are situated in Cape Coast the capital of the Central Region. The teaching hospital perform all kinds of surgery with the exception of cardiopulmonary surgeries and it is the referral hospital for three regions in Ghana. It is the hospital that all health and allied health institutions use as their teaching hospital. The metropolitan hospital is also the second largest hospital in the region but refer also to the teaching hospital.

Closed and open-ended self-administered questionnaire was used to collect data from the respondents. The questionnaire was subdivided using the specific objectives of the study. A period of four months was used to collect data from the respondents. Convenient sampling technique was used to select 200 respondents from the two hospitals. This technique was used because the respondents run shifts duty and it was difficult getting all of them at the same time. Also, some of the respondents were on annual leave and the research had to follow them to their locations. Data collected from the field was analyzed and presented. Data were analyzed using the Statistical Package for the Social Sciences (SPSS version 20.0) because this version was the one available at the time of analyzing data. Descriptive statistics (including frequency distributions and measures of central tendency) were used to organize and summarize the data. The results were recorded as frequencies, percentages, means, and standard deviations. To determine the effect of the POP management, samples t-test was used to compare data from the various groups, to evaluate the differences in KAP of POP assessment and management. A p-value less than 0.05 were used as significant for all the statistical tests.

The methods of the study were driven by the following research questions and hypothesis:

Research questions

1. What do the nurses know about postoperative pain assessment and management?
2. What are the health care providers’ attitudes and beliefs about pain?
3. Do health care providers effectively assessed and managed postoperative pain?
4. What factors impede effective postoperative pain assessment and management?

Research hypothesis

Ho: There is a positive relationship between knowledge and practices of the nurses regarding postoperative pain assessment and management.

Results

Demographic characteristics of the respondents

The respondents were 200 health care practitioners who were nurse anaesthetics and professional nurses who worked directly with postoperative patients from Cape Coast Teaching Hospital and Cape Coast Metropolitan Hospital. Their age ranged from 20 to 49 years old, with the mean age of 29.9 years.
(approximately 30 years). Half or 50% of the respondents were between 20 and 29 years old (Table 1). As for gender, 56% were females and males 44%. In addition, 79% were Christian and 68% were Akan. With regards to duration of service, 40% of the respondents had served for more than four years. Also, less than half (42%) had served in the postoperative ward between the ages of one to five (1-5) years. With regards to profession in the health service, more than half (52%) of the respondents were general nurses. For educational background, 54% of the respondents graduated with a diploma’s/advanced diploma’s degree and 6% had masters’ degree. In terms of standards in used pain management, 80% practice current standards in pain management.

Table 1. Demographic characteristics of the respondents (N = 200)

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (in years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>100</td>
<td>50.0</td>
</tr>
<tr>
<td>30-39</td>
<td>92</td>
<td>46.0</td>
</tr>
<tr>
<td>40-49</td>
<td>8</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>88</td>
<td>44.0</td>
</tr>
<tr>
<td>Female</td>
<td>112</td>
<td>56.0</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>158</td>
<td>79.0</td>
</tr>
<tr>
<td>Muslim</td>
<td>30</td>
<td>15.0</td>
</tr>
<tr>
<td>Traditional</td>
<td>12</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Akan</td>
<td>136</td>
<td>68.0</td>
</tr>
<tr>
<td>Ewe</td>
<td>28</td>
<td>14.0</td>
</tr>
<tr>
<td>Ga</td>
<td>28</td>
<td>14.0</td>
</tr>
<tr>
<td>Northern</td>
<td>8</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Duration of Service</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than a year</td>
<td>12</td>
<td>6.0</td>
</tr>
<tr>
<td>1-2 years</td>
<td>64</td>
<td>32.0</td>
</tr>
<tr>
<td>3-4 years</td>
<td>44</td>
<td>22.0</td>
</tr>
<tr>
<td>More than 4 years</td>
<td>80</td>
<td>40.0</td>
</tr>
<tr>
<td><strong>Duration of Service in Postoperative Area</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 years</td>
<td>76</td>
<td>38.0</td>
</tr>
<tr>
<td>1-5 years</td>
<td>84</td>
<td>42.0</td>
</tr>
<tr>
<td>6-10 years</td>
<td>40</td>
<td>20.0</td>
</tr>
<tr>
<td><strong>Profession in Health Service</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anaesthetist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Nurse</td>
<td>24</td>
<td>12.0</td>
</tr>
<tr>
<td>Enrolled Nurse</td>
<td>104</td>
<td>52.0</td>
</tr>
<tr>
<td>Others</td>
<td>56</td>
<td>28.0</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Education Qualification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>44</td>
<td>22.0</td>
</tr>
<tr>
<td>Diploma/Advance Diploma</td>
<td>108</td>
<td>54.0</td>
</tr>
<tr>
<td>Bachelor (BSc)</td>
<td>36</td>
<td>18.0</td>
</tr>
<tr>
<td>Masters (MSc)</td>
<td>12</td>
<td>6.0</td>
</tr>
</tbody>
</table>
**Research Question 1:** What do the nurses know about postoperative pain assessment and management?

<table>
<thead>
<tr>
<th>Area of Knowledge</th>
<th>Poor No. %</th>
<th>Good No. %</th>
<th>Chi-Square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person who best tells about patient’s pain</td>
<td>68 34.0</td>
<td>132 66.0</td>
<td>5.255</td>
<td>.022</td>
</tr>
<tr>
<td>Knowledge of POP enhances management</td>
<td>42.0</td>
<td>196 98.0</td>
<td>59.875</td>
<td>.000</td>
</tr>
<tr>
<td>Impact of effective POP management</td>
<td>76 38.0</td>
<td>124 62.0</td>
<td>2.922</td>
<td>.087</td>
</tr>
<tr>
<td>Effect of pain on patient’s behaviour</td>
<td>64 32.0</td>
<td>136 68.0</td>
<td>6.697</td>
<td>.010</td>
</tr>
<tr>
<td>Each patient experiences pain differently</td>
<td>16 8.0</td>
<td>184 92.0</td>
<td>42.836</td>
<td>.000</td>
</tr>
<tr>
<td>Pain assessment ensures effective management</td>
<td>20 10.0</td>
<td>180 90.0</td>
<td>38.095</td>
<td>.000</td>
</tr>
</tbody>
</table>

The finding from the study indicated that more than half (66%) of the respondents stated the pain is not best tell by the professions whiles 34% indicated health professional can best tell pain of a patient. Also, the result of the study, almost all (92%) of the respondents indicated that the knowledge of the health care professional on pain can better be used to manage pain and only 2% stated they cannot manage pain with their knowledge.

Results shows that more than half (62%) of the respondents indicated that postoperative pain has impact on muscle tension whiles 38% stated pain had no impact on muscle tension. Also, more than half (68%) of the respondents stated pain affects patients’ behaviour while 32% stated otherwise. The results also that almost all the respondents (92%) stated patients experience pain differently after surgery whiles 8% did not believe that. From the result above, 90% respondent that severe pain affects patients’ vital signs but 10% did not believe that. Almost all the respondents (98%) of the respondents stated that to effectively manage pain, it must first be assessed but 2% did not support it.
Research Question 2: What are the health care providers’ attitudes and beliefs about pain?

Table 3. Attitudes of Health Care Practitioners Toward POP Control (N=200)

<table>
<thead>
<tr>
<th>Area of Attitude</th>
<th>Strongly Agree No. (%)</th>
<th>Agree No. (%)</th>
<th>Disagree No. (%)</th>
<th>Strongly Disagree No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culturally, pain or suffering is necessary</td>
<td>8(4)</td>
<td>20(10)</td>
<td>84(42)</td>
<td>88(44)</td>
</tr>
<tr>
<td>If a patient lies quietly in bed it means he/she is not in pain</td>
<td>8(4)</td>
<td>0(0)</td>
<td>92(46)</td>
<td>100(50)</td>
</tr>
<tr>
<td>Behavioural observation is not appropriate pain assessment</td>
<td>4(2)</td>
<td>36(18)</td>
<td>104(52)</td>
<td>56(28)</td>
</tr>
<tr>
<td>Pain should be assessed before and after pain management</td>
<td>112(56)</td>
<td>40(20)</td>
<td>40(20)</td>
<td>8(4)</td>
</tr>
<tr>
<td>After an operation, if the patient seems to rest in bed with no body movement, it means that the patient has no post-operative pain</td>
<td>4(2)</td>
<td>104(52)</td>
<td>68(34)</td>
<td>24(12)</td>
</tr>
<tr>
<td>Allowing relatives to be involved in POP care will help to reduce pain</td>
<td>4(2)</td>
<td>36(18)</td>
<td>136(68)</td>
<td>24(12)</td>
</tr>
<tr>
<td>Patients’ beliefs and values should be considered when assessing and managing pain</td>
<td>60(30)</td>
<td>56(28)</td>
<td>60(30)</td>
<td>24(12)</td>
</tr>
</tbody>
</table>

In this study as shown in Table 4, the attitudes of the respondents towards postoperative pain were assessed. None of the respondents selected neutral. The findings were as follows: as regarding assessment of pain after surgery, less than half (30%) indicated they constantly do while 40% indicated they frequently do so. In terms of administration of pain medication, more than half (52%) stated they frequently administer pain medication to relieve patients’ pain. The findings also indicated that, more than half (56%) frequently document the characteristics of postoperative pain and about 46% which is majority frequently observed the side effect of pain medication.

It was also revealed that 36% which is majority occasionally administer pain medication based on one’s own judgement. Concerning reassessment of pain after the administration of pain medication, 58% stated, they frequently reassess after pain medication. Regarding distraction of patients from pain, occasionally 48% distract patients’ mind from pain. With regards to the attitudes of the health care practitioners, 64% of the respondents talked to patients in pain in a soft voice. The study also revealed that 42% which is less than half constantly document pain intervention after administration of pain.

The study revealed that 30% of the respondents always and sometimes consider patients’ beliefs when assessing and managing pain. When considering the practices of postoperative pain management, 68% which is more than half of the respondents indicated that, sometimes involved relatives in the management of pain to reduce pain after surgery.

The results show that majority or 56% of the respondents always assess patients’ pain before and after the administration of pain medication but 4% revealed that they never assess pain before and after administration of analgesics.

The study revealed that the respondents believe that patients think that pain is necessary in accordance with their beliefs. The results
show that 44% which is the majority of the respondents do think that pain is necessity.

**Research Question 3:** Do health care providers effectively assessed and managed postoperative pain?

**Table 4.** Practices of Postoperative Pain Control (N=200) Constantly = Cont, Frequently = Freq, Occasional = Occa, Never = Nev

<table>
<thead>
<tr>
<th>Area of Practice</th>
<th>Const</th>
<th>Freq</th>
<th>Occa</th>
<th>Nev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess pain before manage</td>
<td>60(30)</td>
<td>80(40)</td>
<td>52(26)</td>
<td>8(4)</td>
</tr>
<tr>
<td>Document the POP pain characteristics.</td>
<td>48(24)</td>
<td>112(56)</td>
<td>36(18)</td>
<td>4(4)</td>
</tr>
<tr>
<td>Reassess POP pain after pain medication.</td>
<td>36(18)</td>
<td>116(58)</td>
<td>36(18)</td>
<td>12(6)</td>
</tr>
<tr>
<td>Pain medication is administered routinely</td>
<td>24(12)</td>
<td>104(52)</td>
<td>60(30)</td>
<td>12(6)</td>
</tr>
<tr>
<td>Pain medication is administered based on personal judgement</td>
<td>36(18)</td>
<td>44(22)</td>
<td>84(42)</td>
<td>36(18)</td>
</tr>
<tr>
<td>Observed the side effects of pain medication (Morphine) after administration.</td>
<td>52(26)</td>
<td>92(46)</td>
<td>36(18)</td>
<td>20(10)</td>
</tr>
<tr>
<td>Distract patient attention from pain using non-pharmacological methods</td>
<td>36(18)</td>
<td>40(20)</td>
<td>96(48)</td>
<td>28(14)</td>
</tr>
</tbody>
</table>

In this study, the practices of the respondents towards postoperative pain were assessed. The findings were as follows: as regarding assessment of pain after surgery, less than half (30%) indicated they constantly do while 40% indicated they frequently assess pain after surgery. In terms of administration of pain medication, more than half (52%) stated they frequently administer pain medication to relieve patients’ pain. The findings also indicated that, more than half (56%) frequently document the characteristics of postoperative pain and about 46% which is majority frequently observed the side effect of pain medication such as morphine.

It was also revealed that, 42% which is majority occasionally administer pain medication based on one’s own judgement. Concerning reassessment of pain after the administration of pain medication, 58% stated, they frequently reassess after pain medication. Regarding distraction of patients’ attention from pain, occasionally 48% distract patients’ mind from pain.

**Research Question 4:** What factors impede effective postoperative pain assessment and management?

**Table 5.** Perceived barriers to postoperative pain assessment and management

<table>
<thead>
<tr>
<th>Perceived Barriers</th>
<th>Yes No. %</th>
<th>No No. %</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of addiction</td>
<td>136 68.0</td>
<td>64 32.0</td>
<td>200</td>
</tr>
<tr>
<td>Patient’s ethnicity</td>
<td>132 66.0</td>
<td>68 34.0</td>
<td>200</td>
</tr>
<tr>
<td>Non-Availability of Drugs</td>
<td>150 75.0</td>
<td>50 25.0</td>
<td>200</td>
</tr>
</tbody>
</table>
The study revealed that opioids addiction is one of the barriers to the management of postoperative pain. The results show that more than half (68%) agreed that patients will be addicted when given opioids. Also, the results show that less than half (66%) which is the majority of the respondents strongly agreed that the ethnicity of a patient can be a barrier to postoperative pain management. Majority of the respondents stated that non-availability of analgesics are barriers to POP management.

**Research Hypothesis:** There is a positive relationship between knowledge and practices of the nurses regarding postoperative pain assessment and management.

The table shows correlation knowledge and postoperative pain management practices. This means that there is a strong relationship between the two variables. From the table above, the Pearson’s r is 0.985. This value is very close to 1. For this reason, it was concluded that there is a strong relationship between knowledge and the usefulness of practice of postoperative pain management.

Furthermore, from the tables the Sig. (2-Tailed) value is 0.002. Since this value is less than 0.05, it is concluded that there is a statistically significant correlation between knowledge and postoperative pain management.

**Table 6. Test for Knowledge and Practices of Postoperative Pain Management**

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td>Practice</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice</td>
<td>Pearson Correlation</td>
<td>0.985**</td>
<td>0.002</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>200</td>
</tr>
</tbody>
</table>

**Table 7. Chi-Square Test for Knowledge and Practices of Postoperative Pain Management**

<table>
<thead>
<tr>
<th>Value</th>
<th>Asymp. Sig (2-sig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>96.73</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>79.44</td>
</tr>
<tr>
<td>Linear-by-Linear</td>
<td>23.83</td>
</tr>
<tr>
<td>Association N of Valid Cases</td>
<td>200</td>
</tr>
</tbody>
</table>

The results above examine how significant knowledge differs across the amount of usefulness respondent attached to postoperative pain management practices. A p-value of .000
confirms a significant association between knowledge and the usefulness of practice of postoperative pain management. It is also an indication that the practices of care in postoperative pain management differs across the various academic qualifications (knowledge).

Discussion

Knowledge regarding postoperative pain

The post-operative orders commonly used are mere guidelines and hence may not sufficiently address post-operative pain management for every patient operated on. Those who take care of the patients need to have the knowledge on post-operative pain management which should be applied appropriately in the immediate post-surgical period for the patients to benefit. Despite the majority (66%) of the respondents in the study indicated that postoperative pain is best told by the patients themselves, most (98%) of them felt they had sufficient knowledge on postoperative pain assessment and management. This is not consisted with a study by Johansen, Romundstad, Nielsen, Schirmer, & Stubhaug, (2012), which reported that the incidence of persistent postoperative pain (PPP) is as high as 40% with 18.3% of patients reporting moderate or severe pain. A further 34% said pain is best told by health care professionals but not the patients. The finding of this study is not corresponded with the findings of Johnson (1989) who investigated the assessment of pain from the accounts of patients which were included intensity, location, timing and previous pain. The finding indicated that patients accounts on are an important factor in pain assessment based on the assumption that only patients know the accurate quantity and amount of pain. It also incurs with Adequate pain management would be better managed if it were based on evidence-based knowledge (Wilson, 2007). Also, the findings from this study support Wilson (2007) who reported that pain management education and area of specialty affects knowledge of pain management. But she also suggested that the work environment also plays a factor in the success of pain management for patients. Nurses must become educated, encouraged to be reflect, and to use evidence-based practice in the management of pain.

The results show that more than half (68%) of the respondents stated pain affects patients’ behaviour while 32% stated otherwise. This finding is consistent with a study by Luckmann and Sorensen (1987) and Johnson (1989) who studied behavioural observation of patients. They reported that pain affect patients’ behavioural changes. The study by Peters, Sommer, Van Kleef and Marcus (2010) and Khan, Ahmed and Blakeway (2011) support this result. They reported that evidence indicates that psychological factors, including anxiety, depression, fear of surgery and catastrophes associated with increased risk for persistent POP.

Attitudes of health care practitioners towards postoperative pain

The study revealed that 40% of the respondents frequently assess patients’ pain and also 52% frequently administer analgesics after the assessment of pain. This concurs with other studies (Chapman & Syrjala, 2001) which used McGill Pain Questionnaire (MPQ) to assess location of pain, characteristics of pain, pain relief, and level of intensity of pain. The items included are both closed-ended and open-ended questions. Pain characteristics as described by the patients such as dull pain, throbbing pain, sharp pain, exhausting pain, burning and stinging pain, writhing pain, as well as other feelings that accompany pain such as nausea, vomiting (Prevost, 2005; Price, & Bushnell, 2004).

The dose of analgesic for pain relief that the patients receive is an indicator for the severity of pain and duration of pain, as reported in the studies of Prevost (2005) with abdominal hysterectomy patients, ANZCA (2005) with patients with abdominal surgery, and Swain (2008) with patients undergoing a caesarean section. These findings are consistent with the study findings which revealed that less than half (46%) of the respondents observed the effect of medication on the patients. The finding of this study also indicated that, most of the respondents (36%) which is the majority occasionally administer pain medication base on their own judgement but 18% of the respondents had never administer medication base on their own judgement. This is not in consistent with the study by Jablonski and Ersek (2009) which stated that nurses must be able to become
autonomous and also work within interdisciplinary teams when attempting to manage patients’ pain. Jablonski and Ersek (2009) proclaimed that a gap between current best practice, and actual practice related to pain management in long term care facilities continues to exist. The purpose of their study was to investigate the extent to which staff working in extended care facilities, adhere to pain management practice guidelines, and incorporate evidence-based practice into their daily work related to adequate pain management.

It was revealed by this study that, less than half (42%) of the respondents constantly document the intervention rendered to patients. This supports and is in consistent with a study which stated that nurses commonly oversee residents’ plan of care due to the lack of visits by the primary care physician. Nurses caring for the residents are in the best position to assess their pain. The testing of interventions focused on nursing documentation (Jablonski & Ersek, 2009) and assessments of analgesic agents’ effectiveness were shown to be 40% and 20% respectively for PRN and scheduled pain medications. Medication side effects related to documentation was also poor (73%). Documentation of the re-evaluation of new medication side effects was (63%); however, this was not within the recommended time frames (Jablonski & Ersek, 2009). More than half (58%) frequently reassess pain after the administration of analgesics and 18% constantly reassess the intensity of pain after given patient analgesic. These results are in support of a study by Jablonski and Ersek (2009) which stated that Frequency of assessment was also included with these indicators as well as the effectiveness of changes in pain following a change in the treatment regimen, and assessment of residents' side effects after receiving analgesics.

The findings show that more than half (56%) of the subjects stated that they always assess pain before and after administration of analgesics. These findings are not in consistent with a research that indicates a lack of knowledge for best practice related to opioid use. There is a considerable gap between best practice and how care providers assessed and adequately managed pain for the residents in the care of the staff. As a result, an appeal has been made to staff members of nursing homes and administrators to investigate their current policies and procedures. Failure to comply with current best practice must not (Jablonski & Ersek, 2009).

The finding is consistent with a study by Rees (2000) which stated that postoperative pain management is a major responsibility of nurses who provide care for patients recovering from surgery. In the postsurgical environment, the nurse has a pivotal role in assessing the patient with pain, implementing both doctor and nurse-initiated pain interventions and evaluating the patient's response to pain control treatments. Apart from its humanitarian utility, effective relief of postoperative pain is a critical element of a patient's postoperative recovery.

Postoperative pain Assessment and management Practices

The study indicated that 40% of the respondents frequently assess pain before they manage. This finding is supported by a study conducted by Chronic Pain Policy Coalition [CPPC] (2007) which reported that the use of visual analogue scale has been used by several researchers to assess pain. With regards to the characteristics of pain the finding of this study indicated that more than half of the respondents 56% stated that they frequently document the characteristics of POP. This is consistent with the study by Poomnikom (2000) and CPPC (2007) which reported that Pain characteristics as described by the patients such as dull pain, throbbing pain, sharp pain, exhausting pain, burning and stinging pain, writhing pain, as well as other feelings that accompany pain such as nausea, vomiting.

Barriers to effective postoperative pain assessment and management

The respondents (52%) agreed that patient would be addicted when given opioids analgesics as barriers to the effective management of postoperative pain. The finding is consistent with the study by Helme and Gibson (2001) which states that significant life events such as a death of a spouse, retirement from their job, or their loss of independence, may alter their views on pain. Researchers also found that patients were reluctant to report pain and feared that opioids were addictive or too dangerous (Kaasalainen, Martin-Misener, Carter, DiCenso, Donald, & Baxter 2010).
Conclusions

There were adequate knowledge of postoperative pain assessment and management among respondents but there is still knowledge gap with regards to who best tell if there is pain. The survey has made it evidently clear that most of the respondents assess pain before and after administration of pain medications. The study also demonstrated that, respondents frequently reassess patient for side effects of pain medications. The study revealed that respondents withheld opioids because they believe opioids will cause addiction to patients. It is concluded that knowledge and practices of postoperative pain assessment and management were statistically significantly related and there is a strong relationship between knowledge and practice of postoperative pain assessment management. The recommended that, non-pharmacological approach should be used in combination of opioids for postoperative pain control, hand books should be available for nurses to enhance effective postoperative pain assessment and management. Also, further should be done on factors that influence postoperative pain.

Acknowledgement

The author would like to express his sincere appreciation to all the participants who were willing to cooperate with this research as well as to everyone who helped in any other way. In addition, I would also like to express our deep appreciation to Professor Johnson, Dr. Mupepi, and Dr. Mate-Siakwa for their guidance. Also thank my wife and kids for their encouragement and support.

References


Patients with Breast Cancer: Care in the Eyes of their Caregivers

Article by Engelbert C. Manuel, Abdel B. Carlos, MAN, RN; Joy Nomarie S. Mercado, MN, RN; Mary Wella Patrysse G. Almojuela, RN, Jefferson S. Bacoling, RN

Abstract

Previous quantitative studies have been conducted on breast cancer patients in terms of understanding and comprehending the nature of the disease. However, little is known about the lived experiences of caregivers of breast cancer patients. The study aimed to understand the lived experiences of caregivers of patients with breast cancer.

A Gadamerian-phenomenological approach and Van Manen methodological approach were used in the study. Data were collected using in-depth individual interviews. Researchers utilized unstructured which was aided with audio and/or video recorders. Seven participants included, who provide regular assistance in their activities of daily living, whose age from 21 -65. Data transcription and analysis used van Manen’s hermeneutic phenomenological approach.

The meaning of lived experiences of caregivers of patients with breast cancer revealed thematic categories: caregivers being human, challenges as a caregiver thoughts and emotions emerging, lifting life above illness, caring as a choice, support despite challenges, strengthened relationship, light during darkness, escape amidst difficulties, accepting inevitable death, accepting a loss of a loved one.

It revealed that there is diversity in caregiving experiences among the participants despite going through the same situation, sharing nearly similar experiences of giving care to these patients. The study asserts that there is universality of the caregiving phenomenon across cultures similar or otherwise even with subsets of smaller cultures.

The study can potentially benefit any agencies or institutions that renders care to patient with cancer. This study can potentially add credence to their efforts of providing support mechanisms to the caregivers of breast cancer patients.

Keywords: Lived Experiences, Caregivers, Breast Cancer, Van Manen, Gadamerian, Hermeneutics.

Introduction

Cancer has been a prevailing chronic illness throughout the world and in the Philippines. It is a leading cause of death worldwide, accounting for 8.2 million deaths in 2012 (Ferlay, 2013). Particularly, breast cancer is the most common cancer among women and is ranked as the world’s 5th most common type of cancer, causing 521,000 deaths around the world (Bray, 2012). Cancer and cancer treatments not only affect the patient, but also the people who are responsible for the well-being of these patients. These people are usually families or caregivers who are faced with such daunting and exhaustive tasks such as helping the patient with medication, doctor’s consultation and many more.

A caregiver is a person whose role has traditionally included those activities that assist the client physically and psychologically while preserving the client’s dignities (Girgis, 2013). Caregivers may be spouses, partners, children, relatives, or friends who help the patient with activities of daily living and health care needs at home (Garnand, 2013). It also includes giving emotional and spiritual support, such as helping the patient deal with feelings and making hard decisions.

Further research was also needed in order to foster the caregivers of breast cancer patients’ experiences of living in hope, wherein nursing activities were required in order to facilitate the caregivers’ entering into the state of recollection. It was therefore for this reason that
this study was conducted in order to address the gap of previous studies that have been conducted.

Little is known about the lived experiences of caregivers of these breast cancer patients. LoBiondo-Wood (2013) cited in his survey that one of the top research priorities for oncology nursing research is the family and caregivers’ intervention that is why the researchers were able to raise our grand question “What are your experiences as a caregiver to a patient with breast cancer?” The researchers utilized the Van Manen methodology for gathering data and analysis. The Gadamerian hermeneutical approach as the underpinning philosophical perspective of the study.

The study aimed to describe the meaning of the lived experiences of caregivers of patients with breast cancer.

Methods

A hermeneutic phenomenological Gadamerian approach was used as the underpinning philosophical perspective to analyses and interpret the lived experiences of caregivers of patients with breast cancer. The purpose of this approach was to know and understand the lived experiences of caregivers in order “to gain information” or “to collect data” albeit seemingly an incorrect expression in a Gadamerian sense (Fleming, 2003), therefore the use of the term “gaining understanding” of the caregivers’ lived phenomenon prevailed throughout the research process. In addition, van Manen’s (1990) description of the life worlds were used to structure the meanings of the experiences, namely: lived body, lived time, lived space and lived relation.

Setting and participants

There were seven participants included and participated caregivers of patients with breast cancer, who provided regular assistance in their activities of daily living, whose age ranges from 18 to 65 years old, three participants were men and four participants were women regardless of their socio-economic status and how long they have assumed the role of being caregivers. Where there may be multiple caregivers of a particular breast cancer patient, they were be considered as participants for the purpose of maximum variation. They may be immediate family members or persons related to them by consanguinity. The researchers excluded caregivers with psychological illnesses or with altered cognitive function which was determined through an exploratory question prior to the content interview (see Appendix E). The number of participants depended on saturation. This study was conducted in Baguio City, La Union, and Pangasinan.

Sampling

The researchers utilized a purposive-convenience maximum variation sampling. Purposive means selecting a participant that generates useful data for our study (Burnard, 2004). It was utilized with the help of referral system to identify potential participants that passed in the researcher’s inclusion criteria through personal contacts and word-of-mouth (Kongsuwan W. Y., 2016). Maximum variation was also utilized sampling wherein it involves selecting caregivers who are caring for patients with breast cancer whether in the short or long-term basis and caregivers of either newly diagnosed or long before diagnosed patients with breast cancer.

Data gathering tools

The researchers utilized unstructured interviews in eliciting the lived experiences of the participants which was aided with audio and/or video recorders if allowed by the participants during the interview proper.

Data gathering procedure

The researchers submitted the proposal to the Saint Louis University Research Ethics Committee last December 2016. In the event that the Research Ethics Committee had disapproved the study, the researchers made the necessary revisions until approval. The researchers looked for caregivers of patients with breast cancer, which fit the inclusion criteria through referral systems. The researchers then administered an informed consent that protects the rights of the participants. Before obtaining the informed consent to the participants, the researchers explained what the research was all about, the risks and the benefits. The researchers informed the participants that they may refuse to participate in the study, or may withdraw at any point of time during the study. The main data gathering tool was through in-depth individual interview.
The researchers continued collecting data from the participants. The researchers conducted two follow up interviews in each participant and it was done within the study in order to facilitate the hermeneutic circle and engage the data in a guided approach. When there was enough information that seems to replicate or duplicate the themes and the ability to obtain additional new information has been attained, further interview was ceased. This was when coding may no longer be feasible as saturation has been achieved (Guest, 2006).

Data analysis

Following each interview, the researchers transcribed the acquired data into a script of the interview. The transcribers transcribed the interview using the following formatting: Arial 12-point face-font; one-inch top, bottom, right, and left margins; all texts began at the left-hand margin (no indents); the entire document was left justified.

The participant’s comments/responses began in the next line in the first column of the box. Audiotapes or video recordings were transcribed verbatim, that is word for word or exactly as said. It was included any nonverbal or background sounds like laughter, sighs, coughs, claps, snaps, gestures, facial expressions, pen licking, voice inflections, etc. Nonverbal sounds and gestures were typed in parentheses.

The transcribers and all researchers had proofread all transcriptions against the audio or video recording several times until all came to an agreement as to the accuracy of the transcription. The transcriber listened to the tape for three times against the transcript before it was submitted for appraisal by other researchers. All transcripts were audited for accuracy by all researchers.

Analysis of the data was achieved through the Max Van Manen phenomenological approach. The data analysis process involves the phases of immersion, theoretical and open coding, creation of categories and thematic analysis.

The researchers listened and viewed the recording through laptop and simultaneously transcribed. After the researchers watched the videos and transcribed the interview into its linguistic form, they are coded according to whether it was the first or second interview. First interviews were coded as colored blue and second interview were coded as colored orange. We utilized simple topic coding wherein the text is labeled according to its context/subjects/theme. The transcripts are now ready for theming. First, we identify a basic theme that was derived from the textual data these are themes that are simple premises characteristic of the data. Second, we identify the organizing theme, these are clusters of basic themes of similar issues it summarizes the principal assumptions of a group of basic themes which are more revealing of what is going on in the texts. Lastly, we identify the global theme, this are super-ordinate themes that encompasses the principal metaphors in the data as a whole, under this are the four life worlds.

Strengths and limitations

An important limitation of the study is that only 7 participants took part, and most of them were their own relative or are related by blood. Although participants were recruited until saturation was achieved, more participants may have been recruited from a wider pool with close to similarities in characteristics as possible. While caregivers can be classified with more specific or definite categories, due to the availability of the study population that presented itself to the researchers at the time of looking for them, the researchers merely lumped all caregivers as a singular category.

Another limitation of the study is that these participants were not analyses with respect to the specific career and the dyadic relationship between the patients and their daughters, sons, and wives that might have had specific thoughts or perception in relation to the caring responsibilities and their role in the family as this could not be determined. The researchers’ own depth of experience with caregiving, and being novices with this process and the research approach may be biased, incomplete or to a larger extent not sufficiently sanguine.

The in-depth engagement in the text, the transparency in, and the level of expertise of the researcher students may demonstrate a simple but modest rigor of the study. The varied sources of viewpoints in this aspect added abundantly to the tone and tenet of this study. Another strength is its usefulness in relation to the paucity of research knowledge about the experience of caring mindfully in tertiary education.
Ethical considerations

Before the study was conducted, ethical principles were applied to ensure the rights of the participants. The researchers obtained an informed consent from the participants. The researchers assigned codenames or pseudonyms to the participants in order to observe confidentiality and prevent any external factors affecting the data’s credibility during the transcription of data. Credibility of the data was obtained through transcribing the data immediately right after interview to prevent a threat to history and through member checks wherein we validated all transcription of the data to the participants. The researchers applied the duty of beneficence in the study. The participants were given the autonomy to verbalize their experiences as well as their concerns.

The study did not provide monetary incentive to the participants to prevent distortion in the eliciting of lived experiences of the caregivers. To safeguard the collected data, the group assigned one member who was responsible in storing the information in a secure location. The research promoters of the group were the one who took over and gave necessary advices that was needed.

Trustworthiness of the study

To ensure the accuracy and reliability of the data collected, the researchers utilized several techniques to help improve accuracy, credibility, validity and transferability of the study. Member checking was done wherein participants were given their transcripts and the research reports that allowed the participants to agree or disagree with the researchers’ findings. In addition, credibility was built up through prolonged engagement in the text through transcribing the interview, translating and reading it more than three times and persistent observations during data collection. Transferability was achieved through a detailed report of the setting in which the study was conducted in order to compare the applicability of the findings for other possible settings. An audit trail was done wherein documented data, methods and decisions about the research was laid open to external scrutiny by the research promoters and contacted experts. Lastly, triangulation of data was employed in order to facilitate validation of the collected data through cross verification among the members of the research team.

Findings and discussion

Caregiving experience

People practically take on a caregiver role at some point in time as a part of filial duty especially in Asian cultures specifically in the Philippine context. To understand the meaning of experiences of participants caring for patients with breast cancer, describing the context is needed. Van Manen stated four life worlds in understanding these meanings.

Lived relation

This is described as the connection and relationship of the participants to the breast cancer patients. This theme is categorized in subthemes.

A. Caring as a choice

This involves the desire of the participants to assume responsibilities to takecare of the patients. This includes the purposes or reasons in taking care of the patients. The desire of participant to take the responsibility of being a caregiver is included here. Reasons mentioned by participants were, being a family member, the patient resides with them and lastly is the feeling of commitment of the participant to provide care to the patient being a her or his friend.

First, verbalized by participants was being part of the family. In one of the studies, it was described that family members play an important part in providing care and take on different roles as caregivers for patients with chronic diseases (Nolan 2001, Fisher & Weiks 2000, Gillick 2013). In the Filipino context, as experienced by the researchers, Filipino families are very family-oriented. For the caregivers, it is a natural thing to do. They assume the caregiver role because as a part of the family, we have a sense of responsibility towards the other members of the family. In addition, participants assume the caregiver role because no one among their family members can take care of the patient because most of them are busy in their own families.

Second of the reasons, was that participant assuming the caregiver role lives in the same house as person with breast cancer. Caregivers
feel that they are obliged to take care of patient because they feel that they need to help, because they co-habitate with them.

Last of the reasons, aside from assuming the caregiver role of a blood-related relationship is commitment. One of the participants verbalized that it was innate of her to assume being a caregiver due to her desire to rich out and offer her services to her friend even it is not demanded.

Fishbein & Azjen(1975) introduced the concept of behavioral intention which is the ultimate cause of behavior. Behavioral intention or the person’s motivation to engage in behavior was defined as the psychological construct through which attitudes influence a behavior (Fishbein & Azjen, 1975). Since the caregivers are related to the cancer patients either by blood or by a strong bond of friendship, this makes them have the motivation to assume the caregiver role. They are being motivated because they feel that they have the responsibility to take care of them as a personal subjective. And through this motivation, they perform the care giving roles accordingly.

The word “family” in the Philippines does not only include blood-related family members but further extends to non-blood related relationships. It is common among Filipino families that it is innate of us to help and fulfill their filial duties within their families. Another subtheme under lived relation is support despite challenges of being a caregiver.

B. Support despite challenges

In this area, support for the caregivers comes in various forms. Generally, support system pertains to anything that basically gave support to the caregiver. This may be identified as social support, emotional support or financial support. As shared by the participants, the researchers were able to identify and divide support into two, which are social support and physical support.

Social support is a recurrent phenomenon present in the caregiving experience wherein the other family member or relative uplifts feeling, other than in physical means, of the caregiver to lessen the burden of the caregiving experience. In terms of physical support, family members and friends have assisted their patients in their activities of daily living. Caregivers perceive physical support when a family relative or friend engages in an activity that lowers the burden of the caregiver while providing aid to the patient. One participant shared that the patient’s husband usually works during the day and comes home in the afternoon. Whenever he has free time or is off from work, he helps in the care of the patient with breast cancer. Another participant, Miss Orange, considers her sister as a support specially in performing other task towards the patient. Financial support was also important for the caregivers as it is necessary for the continual care for the patients with breast cancer. Financial support usually comes from family or relatives working abroad who are able to allay the expenses of treatment or their daily expenses or from the family themselves who are faced with the financial hardship.

C. Strengthened relationship

This refers to the event that happen when the participant and the patient develops a tight and fruitful relationship during the breast cancer experience until the recovery or survival or before the patient had their peaceful death and also before the occurrence of breast cancer to the patient.

Mr. Violet stated, “We showed more love with each other, become passionate to each other.” The relationship was a lot closer during the disease process. Mr. Violet also stated that they showed more strong feelings to each other by spending time with each other more during the course of the disease. This behavior confirms that families realize that simply spending time with the patient was helpful not only to the patient but also to the caregivers as well (Peeranuch LeSeure and Supaporn Chongkham-ang, 2015).

In times of crises families tend to be closer with each other especially if there is sick family member. Asians are group-oriented. Filipinos tend to come together as a group or as a family to show a sign of support to the sick family member (Kawato, 1995). In times of crisis Filipino families try to depend on each other and members tend to build a closer bond to show a meaningful indication of support.

Among families, Filipinos are very expressive to what they feel. Whenever they experience problems or crises, they tend to voice it out to others especially to their family members. Filipinos have a way of sensing and feeling each other’s behavior or indirectly communicated.
intention through “pahiwatig” (implying) or “pakiramdamman” (a gut feeling).

D. Light during darkness

Spirituality is the belief on a higher power. In the Philippine context, many of its people strongly believe in a God as a giver of life and as a source of salvation from harm. Most Filipinos are Roman Catholic. The rest are scattered to other sects, dominions, religions and belief. Spirituality is belief in the union of a person to nature, or to other people, or to a Supreme Being. It is not limited to the beliefs but also to the traditional practices, rituals, and symbolism of expressions their faith. Among all Asian countries, the Philippines is the only country with a predominantly Catholic population (Goh, 2005). Usually, Filipino Catholics search out for strength from Christian beliefs, practices and customs that aid them in dealing with every day challenges.

Spirituality greatly contributes in palliative care. As to this study, all the participants used the concept of spirituality in rendering care to their patient. The participants were all Christians but they belonged to different dominions like giving process. It also refers to the physical, emotional status and reactions felt by the participants toward the patients.

A. Caregivers being human

Caregivers as human beings are known to experience different emotions in different situations. The concept of ‘being human’ does not have a definite or universal definition but some literature defines being human as a means of preserving dignity through self-purpose, emotional and physical ties towards others (Togashi, 2014). Taking care of a loved one is something innate in life, living and existence of humankind (Bevis, 1981, Benner, 1984, Watson & Smith, 2002). It can be argued that caregiving is associated with the caregiver’s encounter regarding their limitations and inadequacies.

Caregivers provide nearly every form of support for their patient during the illness. Throughout this time, they experience hardships and difficulties because as human being, they become vulnerable to the stress or burden of caregiving. Being human is defined as someone who perceives and experiences different emotions such as fear, denial, sadness, feeling of shock, being optimistic and any other human Jehovah’s Witness, Mormon, and Roman Catholic. As Christians, being spiritual is believing in spirits and a higher power which is God, spirit is the essence of who they are as people and within that person they have a body, a mind and form relationships with people who are important to them (Lugton & McIntyre, 2005).

As a Christian, praying is a part of their spiritual belief. They believed that praying to God alleviates the suffering of someone and prayer can help the caregiver lessen the burden of care giving and to make the family relationship stronger (Herrera, Lee, Nanyongo, Lauffman, & Torres-Vigil, 2009; Kloosterhouse & Ames, 2002; Pearce, 2005; Treloar, 2002). Spirituality helped family caregivers find meaning and purpose in stressful situations, sustaining their psychological wellbeing. Caregivers used religiousness or spirituality as a coping mechanism and a way of strengthening the relationship with the patient.

I. Lived body

This refers to the experiences of the participants within themselves during the care emotion commonly shared by humankind or society. As humans, caregivers suffer from various or different problems and they tend to cope with such experiences.

B. Challenges as a caregiver

These are the actions undertaken by the participants while caring for their patients. This involves necessary activities from the time of the diagnosis to the medical treatment until the recovery or demise of the patient with breast cancer.

Family caregivers in cancer care are individuals who provide uncompensated care and health-related assistance to a family member who has cancer (Effendy, et al., 2014) Most of the time, the caregivers usually stays with the patient. The activities done primarily by the caregivers were focused on assisting the patient in doing the activities of daily living such as bathing, feeding, preparing the things that they need, helping to clean their wound and accompanying her to the hospital. It is not only on the physical aspect of caring but also includes psychosocial aspects like sharing stories with the patient as a way of diverting the attention.
The holistic care given by the caregivers show how devoted they are to their patients. Even if they are being faced with a lot of challenges brought about these activities, they still continue to take care of their patients. Caregivers give holistic support; they want to give all their best so that their patient will be able to recover and survive the cancer. Motivation in giving care for the patient is towards the healing and recovery of the patient which affects the quality of care being given. After all the activities of the caregiver were done, feeling of relief and satisfaction during the care giving process is present when their family members or loved ones are able to survive cancer or lead to a peaceful death. Three subthemes occurred under this theme, these are: a) Characteristics of a caregiver, b) Perceptions and emotions of a caregiver, and c) Keeping my mind off it.

1 Characteristics of a caregiver

The characteristics of a caregiver are the participants’ traits while taking care of their patients and may influence the outcome of their caregiving experience. It differs from person to person and it can be positive or negative. This includes caregivers being zealous and resilient the term ‘resilience’ is used by Elnasseh et al. (2016) to refer to a psychological phenomenon that uses effective coping and adaptation strategies when faced with difficulties or adversities in life. Empathetic, empathy is defined by Olson and Kunyk (2004) as the ability to project understanding for both the patient’s feelings and the reasons for them. As caregivers, they understand what the patient is going through physically from the symptoms to the side effects of their treatment. Being optimistic, optimism is viewed as a state of being positive despite experiencing unfavorable events or difficulties. Caregivers who are optimistic see their positive actions produce a favorable outcome. It is also connected with less stress and less symptoms of depression meaning better mental condition for the caregiver (Elnasseh et al. 2016). LeSeure and Chongkham-ang (2015) observed that some caregivers tend to compare themselves with other people who are in worse situations.

A. Thoughts and emotions emerging

The perceptions of a caregiver are ways of understanding and interpreting something to create a mental impression and would be their attitudes towards caregiving. This affects their consciousness and their ability to provide the care they are supposed to give. Emotions are what the caregivers were feeling while taking care of their loved ones. Seven (7) subthemes further emerged, namely a) Fearful, b) Denial, c) Shock, d) Sadness, e) Guilt, f) Overwhelmed, g) Burdened, g) Not a Burden.

Being fearful is one the unpleasant feeling that was experienced by our participants characterized by an anticipation of possible danger or by an anxious concern. Fear itself causes the participants to be in awe, panic, alarm, or dread while taking care of the cancer patients. In the studies of (May, 1950) & (Wolman, 1978) fear was defined as a temporary reaction and an emotional response to a specific real or unreal danger. Fear was the prevalent emotion experienced by the caregivers. It is connected with uncertainty of the future, the potential loss of a loved one, and a fear of cancer recurrence.

Being in shock is felt by the participants when the care giving experience becomes suddenly upsetting to them. Receiving the news that their loved one was diagnosed with cancer is a shock because the caregivers perceived that cancer was a life-threatening disease (LeSeure, 2015). Cancer is a life-threatening illness that affects not only the patient but also the caregiver and the family where he belongs.

Denial refers to the person’s tendency to fight off an unwanted event by not acknowledging that it is real. For Freud (1953), when a person experienced an unwanted event, they tend not to believe at first. Roing et al. (2008) defines denial as a feeling of grief and frustration at how bad the situation is and thinking of how did it even happen to them.

Guilt, some caregivers have feelings of guilt towards their ill loved ones and sometimes they even feel guilt for being healthy compared to their sick significant others (Otis-Green and Juarez, 2012). Hoffman (2000) views guilt as a feeling described as being regretful and tensed that emerges from the feeling of empathy for the
loved one and thinks that it is their fault for the loved one’s suffering.

overpowering thought or feeling. When a loved one’s condition gets worse, the caregivers may find their caregiving role as overwhelming (Otis-Green and Juarez, 2012). Caregivers’ daily activities were greatly affected due to the added amount of work and responsibilities that were formerly carried out by their loved ones due to their inability to provide for themselves.

Burdened and unburdened, feeling burdened is experienced by the participants when they feel that the care giving experience have caused them too much over load in work, duty, or responsibility and puts them in a difficult situation. Caregivers give holistic care to the breast cancer patients. The demands needed in the care giving process makes the participants feel burdened. The roles and responsibilities of a care giver become extended and difficult as the length of time is increased. The demands of caregiving often spawn additional stressors in caregivers’ lives, commonly referred to as caregiver burden. (Sautter, 2014)

The participant’s feeling of unburdened is associated with his religious belief. Despite of experiencing suffering and dwelling onto it, the participant found a positive meaning of losing his loved one because he knows that the patient is in the hand of the Lord. One of the techniques used by the participant is acceptance. The participant accepted the feeling of burden and surrendered it to the Lord. The participant’s emotion focused on regaining his self that he wanted to feel unburdened. It is very evident in the value of reciprocity, which is a practice still being used in modern Filipino society.

B. Lifting life above the illness

Lifting life above the illness for the participants is trying to find meaning in the caregiving experience despite of the overwhelming situations and emotions caregivers of breast cancer patients are going through. The participants managed to stay positive, have a closer relationship with the breast cancer patients and accept the inevitable death. These subthemes reflected are positivity, seeking for strength and searching for hope.

Being positive for the participant is when they are able to endure the experience and make it worthwhile. Being Positive states that instead of dwelling in sadness and sorrow for their life

Overwhelmed is typically defined as an and the patients’, some caregivers compared their situation to other peoples’ who had more problems (Peeranuch, Le Seure, 2015).

Seeking for strength, despite of the overwhelming experience that the caregivers are experiencing, looking for strength for the participant is when they are looking for source of power and solitude which makes them able to be strong not only for themselves but also for the participants. Looking for strength is the state of being strong physically, mentally, emotionally, and psychologically, it is dealing with problems in a determined and effective way.

Searching for hope, searching for hope is the state of wanting something to happen or be true. It is the chance that something good will happen despite of circumstance. Coping strategies needed in anticipating an event may often conflict with the strategies needed to anticipate the events’ non-occurrence. In their study, the spouses enjoyed thoughts of planning for a future with their partner, yet thoughts of planning for the future without their partner were forbidden, and quickly thrown out of their minds (Lazarus and Folkman, 1996). It states under Searching for Hope that Hope was tangible and important to the daily life of the caregivers. It gave the caregivers courage to support their loved one. “Hope is about making the best of a bad situation and moving on.” It states that hope was not only important for the caregivers to have a positive attitude, but the caregivers believed that it was also helpful for the patients (Peeranuch, Le Seure 2015).

II. Lived space

This refers to an event during the participants’ experience where they had to search for haven where they can be free or just rest for a while after an exhaustive day. This may pertain to places, activities, or things they go to or perform to provide the space from taking care of their patients.

Participants find things they enjoy to do or company to be with to keep themselves away from the situation temporarily; this is to provide a refreshed mind when they go back to the caregiving process. These activities are helpful to them when they feel exhausted about their situation, about the situation of the patient.
A. Escape amidst difficulties

This refers when the participants temporarily get out of the situation temporarily because of the laborious and stressful demands of the care giving experience. Caregivers needed time to get out of the situation temporarily to maintain a well state of mind. A study discussed by (Chongkham-ang, 2015, p. 421) stresses that caregivers can feel negative emotions on the process of caregiving some of this are feeling of being overwhelmed, frustrated and exhausted; thus, getting their thoughts off an unpleasant situation had helped them regain balance in their mind and recover their strength. Sub themes identified were being a pet lover participant get away from the situation temporarily is through taking care of pets. Hobbies rules, another way on how the participant gets away from the situation temporarily is through cooking. For the participant, cooking becomes a diversional activity because the steps involved in cooking needs focus and attention to what they cook. Instead of focusing on the stress implied in caring for the cancer patient, the focus is being transferred to the activity of the participant such as cooking. Coffee break, another way on how the participants get away from the situation temporarily is through going out with friends. In the statement of Miss Green, she managed to have a time to go out with her friends to have coffee; she also added that having a different topic with friends had helped her divert her attention. Diversional activities, focusing on one thing gives redirection to the participant’s activities. Instead of focusing on so many things, the participant is able to limit their activities to focus on one particular activity. Keeping the mind out of the loss of the loved one It is in uncertain for the participants to not think about their patients during the course of the experience. But keeping the mind out of the loss of the loved one is done by the participants to get out of their stressful situation that happened when their patient die.

III. Lived time

Lived time is flow of the time in every moment of the experiences to both the care giver and the breast cancer patient. Lived time is further experienced in the following events.

A. Accepting the inevitable death

Accepting the inevitable death happens when the participants were able to accept the possibility of losing their loved one because of breast cancer. It is when the participants are able to endure the possibility of death brought about cancer without any protests.

Subthemes developed are; Hopeless and belief in life after death. Hopelessness is the feeling of something that is unreachable or impossible to meet, that nothing is going to resolve a certain problem or situation. Feeling of hopeless is sometimes accompanied by feeling of giving up. According to Han et al., (2013) hope is when a person is experiencing a tragedy and there is nothing, he/she can do to fix it.

In the Philippines, even though it cost them a lot of money they will still seek for more options because there are people who can lend them money like friends or family member/s. But even if the participant did her best and it was God’s will, there is nothing she can do because it is the plan of God and it is God who will decide as to what will be the person’s destiny. The best response of the participant is to accept the destiny of the patient that it is God’s will and there is nothing she can do.

Belief in life after death, belief that after a person dies, he or she would live in a concept of heaven or hell. It is a belief in the other life of a person after he or she passes away will be living with a God. According to Boyraz et al., (2015) life after death is categorized as approach acceptance in his study. Approach acceptance is religion-related dimension wherein if a person dies, a happy afterlife is about to come.

Hoping for a peaceful and pleasant life is what the participants would ask for their dying loved ones (Kongsuwan and Chaipetch, 2011). The participant believed that there is life after death, a peaceful life and place together with God. Suffering or burden or any other negative experiences or event is not present or would not happen in that life. The participant also thanked God for taking the patient’s suffering as well as the participant’s by ending the patient’s life because not only that the patent will suffer more if she lived with cancer but also the participant and the other family members.
B. Accepting the loss of a loved one

Accepting the loss of a loved one happens when the participants were able to face the fact that their loved ones already departed. This is a time when the participants were able to let go without any hindrance about the death of their loved one. This is when the participant believes that there is life after death and the notion that the death of a loved one is something that comes from the will of God. The third dimension is the escape acceptance. This is when the participant views the death of the breast cancer patient as a relief and as an escape from suffering.

The figure below summarizes the study’s findings through the themes explicated using Van Manen’s methodological approach. The circle represents the four life worlds under Van Manen specifically Lived Body, Lived Relation, Lived Space and Lived Time. Under these global themes, organizing themes have been identified which in turn show the basic themes of the lived experiences of the participants. The arrows represent interchangeability among the themes.

Implications

Implication for practice

The findings of the study give a valuable and reliable resource for nursing practice that involves exploration of caregiving experience of people taking care of patients with breast cancer. The meaning of the experience of caring for patients with breast cancer among participants presents a diverse attitude, perception and activities. It was presented under four life worlds by Van Manen, lived relation, lived space, lived time and lived body. Nurses in the global arena can reflect on these processes of the caregivers’ experiences. Caregiving experience for some participants maybe distressing, if not given appropriate attention, this can lead to psychological problems such as depression. Interventions such as counseling may be at help in preventing such catastrophic event among participants.

Implication for research

The findings also encourage researchers to stimulate an appreciation of cultural-specific studies about the caregiving experience. Global health organization and associations of reality. The reality that the patient is about to pass away, that there is no chance of the patient to be able to survive and that the only thing to do is to accept the situation. Also, to accept the oncologic care should strengthen policies to integrate care services concerning caregivers of patients with cancer. Further study is recommended to develop a practice model of care to address caregivers’ needs in general. The meanings of the experience could be used to develop a tool to measure the wellbeing of participants. Such tool could be used as an instrument to determine ultimate outcome of palliative care to cancer patients if necessary, especially involving significant others directly involve on their care.

Assertions

Caregivers of breast cancer patients undergo a multitude of experiences while caring for their patients. There appears to be a variety of how these caregivers express and portray their care giving roles to their patients. Although varied, in the researcher’s point of view, these individual caregiver experiences when deciphered and deduced in a dialogical manner with the researchers’ and participants’ interpretation congregate into something common to all of them. The universality of understanding of these lived experiences seem to affirm Gadamer’s second central position or tenet that the participant who has lived the experience and the persons who understands their experience are connected by a collective human consciousness which makes understanding of the phenomenon of caring rather possible. This human consciousness of caring also appears to transcend across cultures and the religio-spiritual belief. There is a notion that caring as a phenomenon is a mutual experience between caregivers even if they belong to different traditions, in this study the Filipinos with subset cultures like the Ilocanos, Pangasinenses, and Tagalogs. This collective is similar to those espoused in the several literatures also portraying the caregiving phenomenon in other countries as discussed earlier. On another bearing of this study, the caregiving experience among this study’s participants also appear to have a communal human consciousness albeit the patient of breast cancer’s period of life, that of the time of cancer diagnosis to the patient’s
Caregivers being human are the participants’ expressions of feelings and ways of behaving as outcomes of the usual and common life occurrences of a typical human interaction with another person needing caregiving. The challenges as a caregiver are the characteristics of the caregiver that makes them hard-wearing and ever-ready against the travails of caregiving. The thoughts and emotions emerging came forth as these were necessary to toughen the caregiver to face the hardships of burden the caregiving. The humanness also entails the caregiver to show human emotions like being fearful, being in denial, guilt, shock, being overwhelmed, being burdened and being likewise unburdened. Caregivers need to use strategies to support their ordeals. To lift their life above illness comprises being optimistic, seeking for strength, and searching for hope. These encumbrances the variety of techniques by which the caregivers would eventually fend for the remainder of their lives after the caregiving event. The gamut of emotions and feelings appear to be common reactions to similar life occurrences. There exists to be some semblance of synchronicity of these human sentiments with an analogous event or incident such as caring for a sick person. The relevant contention of reflection brought forth before a hermeneutic stand for the researchers is that whether these emotions are predictable human behaviors and therefore whether human emotions have been learned as a course of doing an action or where these emotions are unconscious products of understanding.

Another important fact is that caregivers need to have several activities to keep their mind away from the stress and strain of their experience. A host of activities like hobbies and a simple divisional activity appear to enhance their breathing room. Their special integrity is kept healthy by these activities. People need to have a space for themselves.

Caregiving as a phenomenon also entails that the social interaction between and among the caregiver, the patient and their families develop some form of affiliation be it a mere link or a deeper form of affiliation. This seem to be a logical consequence of human interaction where one’s point of view of life events or understandings are muddled together to become
a shared awareness and appreciation of the experience.

A corollary offshoot of the caregiving phenomenon especially with the course of the disease of patients with breast cancer is the acceptance of death or the eventual loss of the patient. It also looks as if these learned helplessness of being unable to control death of a loved one sooner or later develops one’s ability to survive the experience. People appear to learn these abilities to manage and cope with the loss may be because of the length of time it took them to care for a patient with breast cancer, the concept of the inevitability of death, or a relentless exposure to death and dying. From a hermeneutic point of view, the researchers feel that this may lead to a notion of learned resilience.

**Reflection**

In Gadamer’s form of phenomenology, the personal involvement of the researchers and those of the participants in the manner of interpretation that derives an understanding of the caregiving phenomenon cannot be disentangled from each other. In this study, the researchers feel that this is where Gadamer’s first intention of consciousness of prejudgment or preconceptions and prejudices emerges as transcendentally rather than a usual Germane point. The researchers as student nurses took care of a variety of patients in their clinical exposures. The research promoters had a long bout of supervising students caring for patients. These formed their prejudices on the phenomenon.

**Recommendations**

This study worked as the starting point to further understand and interpret the lived experiences of the caregivers of patients with breast cancer in caring for their family members.

1. For health care providers, this can be a guide on health promotion activities such as dealing with caring for patients with breast cancer.

2. As for the field of nursing research, this study hoped to expand the findings that can be used in creating a guide for nursing practice, policymaking, and information dissemination.

3. This study can potentially add credence to their efforts of providing support mechanisms to the caregivers.

**References**

Factors Influencing Student Nurses’ Clinical Learning during their Clinical Practice at Rusangu University, Monze campus, Zambia

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Abstract

Background: Clinical skills acquisition is an essential part of nurse training. However, acquisition of clinical skills could be influenced by the clinical learning environment. The objective of the study was to explore factors influencing student nurses’ learning during clinical practice and develop guidelines for learning enhancement.

Methods: A descriptive cross-sectional study was conducted at Rusangu University in Monze, Southern Province and the study population were nursing students. A total of 50 respondents participated in the study. A proportional stratified random sampling method was used to select the sample. Data was collected using a self-administered questionnaire; analysed using the Statistical Package for the Social Sciences software for Windows version 20. Pearson Chi-Square was used to assess relationship of specific factors and students’ learning experience with a significance level of 0.05.

Results: 50% of the respondents were aged between 21 and 25 years of age, 64% were females whereas 36% were males. Students level of training, 50% were in fourth and above year and 40% were allocated to the clinical area for a minimum of one to two weeks duration. Students overall rating for clinical learning was average at 54%; availability of clinical teachers and Ward Managers was rated at 70%. Communication among students and staff was rated as being good at 58%; 66% of the respondents said staff had a positive attitude towards them. A significant association between level of training and support received during first week of placement (p= 0.000) and time allocated to the unit or ward (p= 0.045) was found Staff shortage, lack of equipment and medical surgical supplies, short practice time in some specialised units, inaccessible ward managers for consultations and clinical supervisors affected students learning.

Conclusion: The School should address the above-mentioned factors and design strategies to improve the clinical learning environment.

Keywords: Factors, Influencing, Student nurse, Clinical learning, Clinical practice.

Introduction

Student Nurses’ Clinical learning is a vital component of nursing education which takes place in the clinical setting (Jamshidi, et al., 2016). Learning in the clinical setting could be influenced by many factors. Literature shows that inadequate faculty members and preceptors to direct learning could influence learning (Mabuda et al., 2008). In addition, workload, lack of role clarity, lack of knowledge among Lecturers and preceptors impact students’ clinical learning (Msiska, et al., 2014). Across the globe, in Iran, researchers have also found that insufficient qualification of nursing lecturers and unsupportive learning environments influence clinical learning (Baraz, et al., 2015). A qualitative study by Rajeswari (2016)] showed that psychosocial factors affect students’ clinical learning. Lawal, et al (2015) reported that preceptor ship, support from clinical staff, ratio of preceptors to students, quality of preclinical conference and type of interpersonal relationships students had with clinical staff and preceptors had a great impact on their clinical learning.

Identifying factors influencing nursing students’ clinical learning environment can,
therefore, improve training and enhance the quality of planning and training. However, little is known about factors influencing nursing students’ clinical learning at Rusangu University. The researcher, as a nurse educator, often heard and observed student nurses expressing concerns and dissatisfaction about clinical learning experiences. As a result of this concern, the researcher developed interest to investigate the experiences of student nurses during their clinical placement in clinical learning environments. It is against this background that the author decided to explore the factors affecting nursing students at Rusangu University during their clinical learning. The results from such a research would yield a good understanding of their experience; and consequently, students would be assisted in achieving their educational goals during clinical placement.

Significance of the study

There was need to conduct this research to explore factors influencing student nurses’ learning during clinical practice at Rusangu University, Monze campus. The research findings will help Rusangu University to develop strategies to improve the clinical learning environment for student nurses at the institution. The research findings will also benefit other institutions, policy makers and regulatory bodies involved in the training of nurses to provide quality clinical training.

Materials and methods

Study design and area

A descriptive cross-sectional study design was employed. The study was carried out at Rusangu University, Monze campus focusing on the clinical practical experiences of student nurses allocated to five hospitals and five clinics in Pemba and Monze districts in Zambia. The students during the clinical experience covered the following practicums: Community health nursing, general hospital wards for basic and advanced nursing procedures, and specialty hospital units for Ophthalmology, Oncology and Psychiatric wards.

Study population

The Study population included all nursing students at the institution doing nursing major courses ranging from year two to fifth year of training. A proportional stratified random sampling method was used to select the student nurses. The study population was divided into subgroups or strata according to year of study. The inclusion criteria included, being a second, third, fourth- or fifth-year student in the nursing programme; willingness to participate in the study; having been exposed to the clinical learning environment in the hospitals, clinics and the community.

Sampling method

The sample size was determined by use of stratified sampling technique. Students were stratified by year of study and a table of random numbers was used to select a proportionate representation of the students.

Inclusion criteria

Only student nurses who had spent a minimum of two weeks in the clinical area were selected to participate in the study.

Exclusion criteria

Student nurses, with less than two weeks of clinical placement were excluded from the study.

Table 1. Sampling frame

<table>
<thead>
<tr>
<th>Year of study</th>
<th>No of students</th>
<th>Proportional sample</th>
</tr>
</thead>
<tbody>
<tr>
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<td>34</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>4 and above</td>
<td>70</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td>67</td>
</tr>
</tbody>
</table>

Data collection tool, procedure and storage

Data was collected using a pretested self-administered questionnaire developed by the researchers based on literature review. 23 items were used to identify Factors influencing student nurses’ clinical learning during their clinical practice.

Data analysis

Data was analysed using the Statistical Package for the Social Sciences (SPSS) software for Windows version 20. Demographic characteristics were summarized using descriptive statistics and measures of central tendency. The Pearson Chi-Square was used to assess the relationship of specific factors and the learning experience of the students in the study. The level of significance for the results shall be
set at .05. A pilot study was conducted prior to the main study. The purpose of the pilot study was to investigate the feasibility of the proposed study and to detect any flaws in data collecting instrument. Pitfalls and errors that may prove costly in the actual study may be identified and avoided. The pilot study sample consisted of 10% of the main sample. The analysis and interpretation of data involves the objective material in the possession of the researcher and his subjective reactions and desire to derive from the data the inherent meanings in that relation to the problem (Basavanthappa, 2007: 442). The questionnaires were given to each respondent after explaining the intent of the research. After data collection the questionnaires were checked for completeness, consistency and accuracy of the responses. The omissions and gaps which were identified and taken note of. Incomplete questionnaires were excluded from analysis. Data from open ended questions were categorized into similar responses and the categories of data were assigned codes. Closed ended questions were also assigned numerical codes. This made it easier to enter and analyse data using Statistical Package in Social Science (SPSS) version 20 software. SPSS was used to process data in frequency and cross tabulation tables. The confidence interval was set at 95%. This is the range in which the value of the population parameter was estimated to be. A 5% level of significance (p value 0.05 or less) was considered statistically significant. The Chi-square test within the SPSS was used to test for associations between independent and dependant variables. A total of 67 questionnaires were distributed and 50 were returned giving a 75% response rate.

**Ethical consideration**

Ethical approval was obtained from Rusangu University Research Committee and from the university’s School of Health Sciences, both of which gave permission in writing to conduct the study. Permission was also obtained from the National Ethical Research Committee. Data was anonymously collected from each respondent. The respondents were free to withdraw from the study at any time they wished. Written informed consent from each individual respondent was also obtained.

**Results**

The main objective of the study was to explore factors influencing student nurses’ learning during clinical practice and develop guidelines for learning enhancement. One of the factors influencing learning was that some of the respondents were not meeting the clinical instructors most of the times (Figure 1). This translated into 52% (26) of the respondents. Half of the respondents 50% (25) indicated that procedures were not being performed as they were taught at school (Figure 2).

Figure 1. Availability of clinical instructors most times
Half of the respondents 50% (25) indicated that procedures were not being performed as they were taught at school.

*Multiple response question.
The main challenge faced by students during clinical practice was lack of equipment to use during practice.
The main challenges depicted in figure 3 which affected clinical practice were lack of equipment and lack of medical surgical supplies and stationery.

**Table 1.** Association between Level of training and Support received during 1st week of placement and time allocated to the Unit or ward (n=50)

<table>
<thead>
<tr>
<th>Level of training</th>
<th>Support received during 1st week of placement</th>
<th>Total</th>
<th>P value</th>
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<tr>
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<td>No</td>
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<tr>
<td>No response</td>
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<tr>
<td>2nd Year</td>
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<td>11(11%)</td>
<td>2(4%)</td>
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<tr>
<td>3rd Year</td>
<td>1(2%)</td>
<td>4(8%)</td>
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<td>4th Year</td>
<td>1(2%)</td>
<td>15(30%)</td>
<td>9(18%)</td>
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<tr>
<td>Total</td>
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<td>30(60%)</td>
<td>18(36%)</td>
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<table>
<thead>
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<th>Level of Training</th>
<th>Time allocated to unit or ward</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>No response</td>
<td>Yes</td>
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<tr>
<td>No Response</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2nd Year</td>
<td>0</td>
<td>11(11%)</td>
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<tr>
<td>3rd Year</td>
<td>1(2%)</td>
<td>4(8%)</td>
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<tr>
<td>4th Year</td>
<td>1(2%)</td>
<td>15(30%)</td>
</tr>
<tr>
<td>Total</td>
<td>2(4%)</td>
<td>30(60%)</td>
</tr>
</tbody>
</table>

**Table 2.** Association between Level of training and Support received during 1st week of placement and time allocated to the Unit or Ward (n=50)

<table>
<thead>
<tr>
<th>Level of training</th>
<th>Support received during 1st week of placement</th>
<th>Total</th>
<th>P value</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>No response</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>No response</td>
<td>0</td>
<td>0</td>
<td>1(2%)</td>
</tr>
<tr>
<td>2nd Year</td>
<td>0</td>
<td>11(11%)</td>
<td>2(4%)</td>
</tr>
<tr>
<td>3rd Year</td>
<td>1(2%)</td>
<td>4(8%)</td>
<td>6(12%)</td>
</tr>
<tr>
<td>4th Year and above</td>
<td>1(2%)</td>
<td>15(30%)</td>
<td>9(18%)</td>
</tr>
<tr>
<td>Total</td>
<td>2(4%)</td>
<td>30(60%)</td>
<td>18(36%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Training</th>
<th>Time allocated to unit or ward</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No response</td>
<td>Yes</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2nd Year</td>
<td>1(2%)</td>
<td>3(3)</td>
</tr>
<tr>
<td>3rd Year</td>
<td>3(6%)</td>
<td>7(14%)</td>
</tr>
<tr>
<td>4th Year and above</td>
<td>1(1%)</td>
<td>13(26%)</td>
</tr>
<tr>
<td>Total</td>
<td>5(10%)</td>
<td>23(46%)</td>
</tr>
</tbody>
</table>

Table 2 summaries the association between level of training and other variables. The study found a significant association between level of training and support received during first week of placement, $\chi^2 = 56.270$, df = 9 and P- value of 0.000. Another association was found between level of training and time allocated to the unit or ward, $\chi^2 = 122.876$, df = 6 and P- value of 0.045.

**Discussion of findings**

Many studies, both quantitative and qualitative, have been conducted on factors influencing students’ clinical learning environment (Papastavrrou et al., 2010; Warne et al., 2010; Saurikoski et al., 2013). Nursing education is composed of two complementary parts: theoretical and practical training (Nabolsi et al., 2012). However, more emphasis is placed on practical training (Borzou et al., 2009) and students are expected to gain competency in various nursing procedures before they can...
practice. Nursing competency is a core ability that is required for fulfilling nursing responsibilities. To acquire nursing competency, nurses must possess the skills and personal traits necessary to effectively perform their duties while integrating multiple elements including knowledge, techniques, attitude, thinking ability and values that are required in specific contexts. Competency cannot be achieved without a conducive clinical environment. Identifying factors influencing nursing students’ clinical learning environment could improve training and enhance the quality of planning and training promotion. Effective clinical experience is gained through a supportive clinical environment, which includes the atmosphere of the clinical placement area, and the relationships shared with clinical staff supervisors and clinical instructors (Lawal et al., 2015).

A conducive and supportive learning environment for student nurses is dependent on several factors such as availability of placement support systems, such as supervision, mentorship, preceptor ship and relationships between the faculty, student nurses and clinical staff (Abdulmutalib et al., 2018). Learning in practice placement requires an environment which is conducive to learning and providing the appropriate support from skilled practitioners and educators. A clinical setting rich in learning experiences, but lacking a supportive environment could discourage the learners in seeking experience. In fact, such a setting results in the loss of learning and growth opportunities. On the other hand, a setting with limited experiences but rich in support may provide opportunities for student nurses to examine new health needs and ways of addressing them. Thus, regardless of where clinical practice is taking place, the learning climate influences student nurses’ achievement and satisfaction with the learning experience (Mabuda et al., 2008). Furthermore, Nursing students expect a supportive clinical environment that is innovative, creative and highly individualized where they feel they are an integral part of the health team and feel comfortable enough to make mistakes and learn from them (Papastavrou et al., 2010). Students learn immensely with mentors who appreciate their individuality and the fact that everyone learns differently (Lambert et al., 2005). It is from clinical placements that students start to garner the necessary attributes of caring, critical thinking skills, application of situational knowledge, competence and clinical skills. Therefore, members of the health team should provide a positive clinical experience to facilitate the progress from novice to expert levels of clinical competence (Murphy et al., 2012). As earlier stated, Nursing as a profession requires integration of theory into practice to meet the demand of quality nursing care. This can only be achieved when students attach great importance to both theory and clinical learning.

In the present study, data were collected using self-administered questionnaires in English language since all the respondents were literate. The study sample comprised 50 respondents who were student nurses. Half 25 (50%) of the student nurses were in the age group of 21 – 25 years, 6 (12%) were between the age of 26 – 30 years, while few were 7 (14%) in the age group of 31 years and above. On gender, majority of the respondents were females who numbered 32 (64%), and males were 16 (32%). The lower percentage of male respondents is attributed to low enrolled number of male students into the program. Among the respondents 25(50%) had their level of training in nursing in year 4 and above, 13(26%) were in year 2 while 11(22%) were in year 3 of training.

The current study revealed that 40 (80%) of the student nurses rated clinical learning average regardless of the level of training and the number of clinical attachments done including those nursing students 20 (40%) whose shortest duration of allocation to the wards or unit was 1 to 2 weeks. The respondents attributed the average clinical learning to lack of equipment to use and inadequate supervision by staff. These findings are consistent with a study by Rajeswaran (2016) who reported that 80% of the nursing students in their study expressed that they lacked support from lecturers during clinical practice as well as inadequate resources. Gurkava et al., (2016) in their study also found out that supervision method and supervisory session frequency affected students’ clinical learning.

Our study found that 27 (54%) of the respondents stated that clinical teachers were not available in the clinical areas most of the time and they rated clinical learning as average. This notion was supported by Nabavi and Vanaki (2010) who found that students were carrying outpatient care without any supervision and that clinical tutors were only seen in the clinical area
when they came to evaluate the students. The rate of non-availability of clinical teachers was attributed to some clinical teachers demanding to be paid before they could teach the students. While the average rate of clinical learning by majority of the respondents 40 (80%) was attributed to staff shortage on the ward and busy schedules for clinical teachers to teach them as they were the same staff managing the wards. The respondents further indicated that most of the times there was no one assigned to teach specific procedures.

One of the most important and interesting findings of our study was that most students who were in 4th year and above were not receiving adequate support from School faculty in their first week of allocation to the clinical area. In Nabavi & Vanaki’s study lecturers were reportedly not accompanying students in the clinical area. The role of the nurse educator should extend beyond the classroom where they spend enough time on clinical teaching and clinical accompaniment (Bruce et al., 2011).

Most of the respondents 35 (70%) rated availability of ward managers for consultations at average. This contributed to average acquisitions of clinical knowledge at average. This was as a result of staff shortages. Ward managers were too busy for consultations most of the times despite being available. The result of the study conducted by Lawal et al in the Caribbean, supports these findings. The study demonstrated that support from the clinical staff impacted on the students’ clinical learning. Furthermore, this was compounded by some challenges such as lack of equipment to use for procedure and some medical surgical supplies. This confirms average clinical learning of students despite clinical supervisor claiming that discussion of conditions on the wards and demonstration of procedures were being done. A lot needs to be done.

Opportunity for learning in the clinical area is crucial as it is the reason for clinical attachment. The study revealed that the respondents 18 (36%) who had rated clinical learning as average their involvement in carrying of nursing procedures was also rated at average. Furthermore, the respondents 16 (32%) who had rated involvement in carrying out specified nursing procedures at above average their clinical learning was rated at average as well. Minimal involvement in carrying out of specified procedures was attributed to staff shortage. This compelled students to concentrate on routine procedures at the expense of being focused on all the procedures and enhance learning. The study further revealed that most of the respondents 31(62%) were exposed to the nursing procedures which were at their level of training. Despite this exposure, their level of learning was rated at average. The reason for this rating was as a result of lack of closer supervision during the period of allocation.

Our study also showed that the involvement of students in carrying out nursing procedures was on average among the majority of students who were in their 4th year of training. The question stands as to why learning was average in most cases. Some of the respondents related this to negative attitude exhibited to them by some of the nursing staff. The respondents indicated that most of the times they were working with students from other institutions which led to congestion in the wards or units and this impacted negatively on their clinical learning. Clinical learning is usually appreciated if the students are in small groups. Each student is given an opportunity to observe and participate in carrying out the procedures. These findings concur with Motisilanyane (2015) in a study in which it was reported that skills acquisition was compromised because students were many in the clinical area such that some of them were unable to see the demonstrated skills. The clinical supervisors confirmed that wards were congested and made learning and teaching process difficult. Suggestions of spreading students across all nursing shifts were made and communicated with the clinical sites in advance so that plans could be agreed upon on how to avoid congestion on the wards.

Theory-practice integration is a major element that sustains quality and drives best nursing practice. One of the barriers to theory-practice integration is the gap between theory and practice in nursing education. The study shows that, despite average clinical learning, most of the procedures were being carried out in the same way as taught at school. This was attested to by 21(42%) of the respondents. It is therefore, important to enhance integration of theory into practice to further reduce the gap between theory and practice. The respondents were also asked whether clinical nursing procedures were being carried out in the same way by students from other institutions. The findings were that 28 (56%) of the respondents said procedures were
carried out in the same way. These respondents’ level of clinical learning was rated at average. Standardized procedure manual could have contributed to the high percentage of respondents who indicated that the procedures were carried out in the same way. The concern is on average rate of clinical learning. The respondents attributed average clinical learning due to shortcuts in the carrying out of some of the procedures as a result of non-availability of some equipment and supplies for procedures. Similarly, a study carried out by Moeti, Van Niekerk and Van Velden (2004) which focused on perceptions of the clinical competencies of newly registered nurses in the North-Western Province of Zambia revealed that shortage of staff, equipment and supplies affected the competency of newly registered nurses in a negative way in the clinical learning.

Good interpersonal relationships and communication are some of the important factors in the learning and teaching process. A significant number of nursing students, 29 (58%), to be specific, in this study rated communication as good among students and staff. These findings are similar to Nahid et al (2016) findings’ in their study where many students stated that they had the most interactions with the instructors and believed that the way an instructor treats a student affects their exposure to clinical learning environment. Additionally, Tiwaken et al (2015) and Janshidi (2016) in their studies entitled, ‘The real world: Lived experiences of student Nurses during clinical practice and the challenges of nursing students in the clinical learning environment’, ‘A qualitative study’, respectively, found that interpersonal relations and communication impact on students’ clinical learning. Furthermore, on Communication Skills the results revealed that many students mentioned the lack of communication skills as the reason for deficiency in communicating with the clinical learning environment. Average clinical learning in this study was attributed to lack of communication skills as well to foster learning. Two-thirds of the respondents 33(66%) said that staff had positive attitude towards them. However, their level of learning was rated at average. Furthermore, the study revealed that majority 42(84%) of the respondents rated staff attitude towards them as positive, felt accepted and respected in the clinical area as part of care providers. Other studies revealed that negative attitudes towards students could influence their clinical practice negatively, (Adibelli et al., 2017; Baraz et al, 2015).

Conclusion

The study revealed that staff shortage, lack of equipment and medical surgical supplies, short time allocated to some of the specialised units, inaccessible ward managers for consultations and clinical supervisors affect nursing students’ clinical learning. It is imperative that the school addresses the above-mentioned factors and come up with strategies to improve students’ clinical learning environment.

Recommendations

To address these challenges the following recommendations were made:

- The school should strengthen the concept of clinical preceptors in the practicum sites to be offering close supervision to students in the absence of school clinical instructors. This can enhance clinical learning.
- The school should find a way of improving the clinical learning environment by providing some basic equipment and supplies to supplement on hospital effort for students to use during their allocation.
- The school should work with health facilities management to determine appropriate minimum number of weeks to be allocated to specialised wards or units for students to acquire knowledge and skills.
- The school should engage management of health facilities on how best to improve the clinical learning environment since students go to these facilities at fee.

Acknowledgments

The authors would like to extend sincere thanks to all the participants who attended the study. We would also acknowledge the Rusang University management for permission to conduct this study. This information was extracted from a PhD thesis by Benius Kaliyangile.

Author’s contributions

BK was responsible for the study conception and design, data collection and analysis and drafting the manuscript. CMN supervised the
research process and made critical revisions to the article.

References


The Impact of Different Learning Methods on Nursing Students Learning Styles at the University of Lahore, Pakistan

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Abstract
Blended learning (BL) is positive development in education. This method provokes the learner’s critical thinking and given different ways for implementation of their knowledge in real life. The objective of the study is to determine the difference of blended learning teaching strategy and lecture-based teaching strategy on the learning outcome of the undergraduate nursing students in Lahore, Pakistan.

Quasi experimental study design was used by utilizing control and experimental groups for comprising two methods of students learning. 197 participants were recruited in control group and experimental groups. The study sample was determined through the convenient sampling method.

In this study the establishing reliability and construct validity of the tool was 0.7 and 0.75 respectively. In addition to this internal consistency Cronbach’s coefficient alpha was computed 0.70. Generally, the reliability and validity were considered acceptable and satisfactory above 0.70.

The results findings revealed that blended learning has significant relationship with awareness (p= < 0.02) learning strategies (p= < 0.07) learning activities (p= < 0.06), evaluation (p=0.04) among the experimental groups.

In the conclusion, blended learning significantly improves the learning of the students and provides the space for better skills in the clinical setting simultaneously. Thereafter, institutions, policy makers and regulatory bodies should incorporate this strategy in the nursing curriculum in Pakistan.

Keywords: Blended learning, lecture-based learning, self-directed learning.

Introduction
In recent era educators identify the different learning styles such as face-to-face learning or traditional method, virtual learning, problem-based learning, project base learning, blended learning etc. In the learning process there is one of the particular relations between a students and fellow students as well as with teacher. Moreover, direct contact in learning enhance this relation¹. Lots of information and long-term experiences are outcome of the positive behavior that depends upon a body language including gestures, tones, rhythm, stress, and volume of voice. Lecture based learning is direct contact in training that give action, response and reaction are directly perceived by the participants². Lecture based teaching environment in the first priority of the students, because of the reason is the direct front face to face education gives more valid instructions and guidance³. There is no doubt that face to face courses are a great source of learning for students where they have positive feeling and great interest in learning⁴. Others are interested in the distance self-directed learning focusing their own convenience. Blended learning (BL) is positive development in education. This method provokes the learner critical thinking and given different ways for implementation of their knowledge in real life. Blended learning facilitates and inspires the student learning and creativity⁵. Open the way of new teaching opportunities and enhance the student engagement. Blended learning enhances students’ competency, satisfaction, motivation, and achievement, therefore to explore in-depth the researcher in this study re-designed and re-developed a combined teaching method for the course⁶. The objective of this study is to explore the effect of blended learning and lecture-based learning on learning outcome of the
undergraduate students using Self-rating scale of self-directed learning tool in Lahore Pakistan.

**Objective**: To find out the impact of different factors affecting nursing students learning styles as well as compare the Lecture Based Learning v/s Blended Learning in an Elective Nursing Course the University of Lahore, Pakistan.

Objective 1: Is there significant difference among the student’s awareness who used blended learning and the student’s awareness who used lecture-based learning?

Objective 2: Is there significant difference among the student’s learning strategies who used blended learning and the student’s learning strategies who used lecture-based learning?

Objective 3: Is there significant difference among the student’s learning activities who used blended learning and the student’s learning activities who used lecture-based learning?

Objective 4: Is there significant difference among the student’s interpersonal skills who used blended learning and the student’s interpersonal skills who used lecture-based learning?

**Null hypothesis**: There is no significant difference in the blended teaching and lecture-based teaching strategies on nursing students learning outcomes.

**Alternative hypothesis**: There is a significant difference in the blended teaching and lecture-based teaching strategies on nursing students learning outcomes.

**Methodology**

To answer the research, question the researcher adopted quasi experimental study design. The population of this study was B.Sc Nursing students in Lahore Pakistan. In Pakistan B.Sc Nursing program has two categories one program is Generic B.Sc Nursing with the minimal entry requirement of successful completion of 12 grade with at least 50 % and the other program is Post RN B.Sc Nursing with the requirement of diploma in Nursing and one year of Post Basic specialization diploma with two years of experience. Participants were recruited through convenience sampling technique. Males and females studying the subject of Leadership and Management (The same course taught in both semesters having same objectives) in nursing program (Generic B.Sc Nursing and Post RN B.Sc Nursing program) of Fall-2016 and Fall-2017 in Lahore School of Nursing, the University of Lahore, were approached. The total sample size of the study was 197.

**Table 1. Intervention strategy of the study**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Experiment Group</th>
<th>No of Students</th>
<th>Control Group</th>
<th>No of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2016</td>
<td>Post RN B.Sc Nursing</td>
<td>49</td>
<td>Generic B.Sc Nursing</td>
<td>50</td>
</tr>
<tr>
<td>Fall 2017</td>
<td>Generic B.Sc Nursing</td>
<td>49</td>
<td>Post RN B.Sc Nursing</td>
<td>49</td>
</tr>
</tbody>
</table>

The permission to conduct the study was taken from the Texila American University Guyana and the Institutional Review Board of the University of Lahore.
Table 2. Data Collection Procedures of the Research for fall 2016 and fall 2017 semesters

<table>
<thead>
<tr>
<th>Time</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2016 and 2017</td>
<td>• Teacher / Faculty participants recruited</td>
</tr>
<tr>
<td>August 2016 and 2017</td>
<td>• Syllabus teaching strategies drafted by researcher</td>
</tr>
<tr>
<td></td>
<td>• Teacher training conducted by researcher</td>
</tr>
<tr>
<td></td>
<td>• Student participants enrolled</td>
</tr>
<tr>
<td>September 2016 and 2017</td>
<td>• Researcher starts observing both classes daily (experiment and control group)</td>
</tr>
<tr>
<td></td>
<td>• Faculty hold first planning meeting with students</td>
</tr>
<tr>
<td>October 2016 and 2017</td>
<td>• Researcher starts observing both classes daily (experiment and control group)</td>
</tr>
<tr>
<td></td>
<td>• Faculty meet daily only for one hour to plan.</td>
</tr>
<tr>
<td></td>
<td>• Researcher observe the meeting</td>
</tr>
<tr>
<td>November 2016 and 2017</td>
<td>• Researcher starts observing both classes daily (experiment and control group)</td>
</tr>
<tr>
<td></td>
<td>• Faculty meet daily only for one hour to plan.</td>
</tr>
<tr>
<td></td>
<td>• Researcher observe the meeting</td>
</tr>
<tr>
<td>December 2016 and 2017</td>
<td>• Researcher starts observing both classes daily (experiment and control group)</td>
</tr>
<tr>
<td></td>
<td>• Faculty meet daily only for one hour to plan.</td>
</tr>
<tr>
<td></td>
<td>• Researcher observe the meeting</td>
</tr>
<tr>
<td>January 2017 and 2018</td>
<td>• Researcher starts observing both classes daily (experiment and control group)</td>
</tr>
<tr>
<td></td>
<td>• Faculty meet daily only for one hour to plan.</td>
</tr>
<tr>
<td></td>
<td>• Researcher observe the meeting</td>
</tr>
</tbody>
</table>

“Self-rating scale of self-directed learning” (SRSSDL) tool was used for this research. Pilot study was executed after build of the tool on 10% of the learners to test the tools and necessary changes were done according to the results of finding and the opinions of experts in the pilot study. Cronbach’s alpha shows a very high level of reliability at $\alpha = .901$. Based on these results it concludes that the instrument is a reliable and valid for this study.

Table 3. Cronbach alpha coefficients for questionnaire

<table>
<thead>
<tr>
<th>Scales</th>
<th>Cronbach’s Alpha</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>.915</td>
<td>42</td>
</tr>
<tr>
<td>Learning Strategies</td>
<td>.888</td>
<td>30</td>
</tr>
<tr>
<td>Learning Activities</td>
<td>.911</td>
<td>36</td>
</tr>
<tr>
<td>Evaluation</td>
<td>.901</td>
<td>33</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>.892</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>.901</td>
<td>171</td>
</tr>
</tbody>
</table>

Results

In the methodology it is discussed that students taking Lecture based learning were the ‘control’ group and the students taking the students taking blending learning semester were in the ‘experimental’ group. There were also two data set one set comprised of generic BSN student and the other group comprised of Post RN BSN students. In 2016 the Generic BSN students were in the control group and Post RN students were in the experimental group and in 2017 the Post RN group was in control group and Generic BSN students were in experimental group.
In figure 1 sociodemographic frequencies of Generic B.Sc Nursing Students in taking lecture based learning were displayed. The mean age of the students were 23 years and 100% of the students were unmarried. All the participants were full time students. Majority of the students were Punjabi (50%) and Pathan (40%). In this session majority of the students were Christian (60%) and Muslims were (40%).

In figure 2 sociodemographic frequencies of Generic B.Sc Nursing Students in taking blended learning were displayed. The mean age of the students were 24 years and 98% of the students were unmarried. All the participants were full time students. Majority of the students were Pathan (50%). In this session majority of the students were Muslims (70%).
Table 4. Normality Test analysis by Shapiro- Wilk Test

<table>
<thead>
<tr>
<th>S. No</th>
<th>Variables</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Awareness</td>
<td>0.7</td>
</tr>
<tr>
<td>2</td>
<td>Learning Strategies</td>
<td>0.6</td>
</tr>
<tr>
<td>3</td>
<td>Activities</td>
<td>0.27</td>
</tr>
<tr>
<td>4</td>
<td>Evaluation</td>
<td>0.71</td>
</tr>
<tr>
<td>5</td>
<td>Interpersonal Skills</td>
<td>0.8</td>
</tr>
</tbody>
</table>

In table 4, normality test of the variables was displayed. The mean of mean is calculated of the five different sections of the outcome learning variables and then the normality test was run. The assumption of the null hypothesis in Shapiro-Wilk test was that the data is normally distributed. In the results of the normality test all the p values were above 0.5 which is the cutoff. Hence, all the variables were normally distributed.

Table 5. T- Test comparison of Lecture Based Method and Blended Learning among Generic B.Sc Nursing Students

<table>
<thead>
<tr>
<th>Standard</th>
<th>Blended Learning</th>
<th>Lecture Based Learning</th>
<th>T(df)</th>
<th>Significance p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>SD</td>
<td>X</td>
<td>SD</td>
</tr>
<tr>
<td>Awareness</td>
<td>2.5</td>
<td>0.53</td>
<td>4.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Learning Strategies</td>
<td>2.01</td>
<td>0.77</td>
<td>4.13</td>
<td>0.07</td>
</tr>
<tr>
<td>Learning Activities</td>
<td>2.2</td>
<td>0.6</td>
<td>4.2</td>
<td>0.46</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2.2</td>
<td>0.5</td>
<td>3.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>2.3</td>
<td>1.0</td>
<td>4.3</td>
<td>0.5</td>
</tr>
</tbody>
</table>

In table 5 independent T test comparison was conducted between the lecture-based learning methods and blended learning to that of the different sections of the outcome variables. There was significant difference between the means of lecture based learning and blended learning.

In all the sections the p value is below 0.05 which shows that the both the learning methods were quite different from each other in terms of student ‘awareness’, ‘learning strategies’, ‘learning activities’, ‘evaluation’, and ‘interpersonal skills.’

![Figure 3: Socio-demographic frequencies of post RN B.Sc nursing students in lecture based learning, 2017](image-url)
In figure 3, Socio-demographic frequencies of Post RN B.Sc Nursing Students in taking lecture based learning were displayed. The mean age of the students were 30 years and 40% of the students were unmarried. All the participants were full time students. Majority of the students were Punjabi (80%) and Pathan (40%). In this session majority of the students were Christian (60%) and Muslims were (40%).

![Figure 4: Socio-demographic frequencies of Post RN B.Sc Nursing Students in blended learning, 2016](image)

In figure 4, Sociodemographic frequencies of Post RN B.Sc Nursing Students in taking lecture based learning were displayed. The mean age of the students were 35 years and 100% of the students were unmarried. All the participants were full time students. Majority of the students were Punjabi (80%) and Pathan (40%). In this session majority of the students were Christian (40%) and Muslims were (50%).

| Table 6. Normality Test analysis by Shapiro- Wilk Test |
|------------------|------------------|---|
| S. No | Variables | P |
| 1 | Awareness | 0.7 |
| 2 | Learning strategies | 0.6 |
| 3 | Activities | 0.27 |
| 4 | Evaluation | 0.71 |
| 5 | Interpersonal Skills | 0.8 |

In table 6, normality test of the variables was displayed. The mean of mean is calculated of the five different sections of the outcome learning variables and then the normality test was run. The assumption of the null hypothesis in Shapairo Wilk test was that the data is normally distributed. In the results of the normality test all the p values were above 0.5 which is the cutoff. Hence, all the variables were normally distributed.
**Table 7. T-Test comparison of Lecture Based Method and Blended Learning among Post RN B.Sc Nursing Students**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Blended Learning</th>
<th>Lecture Based Learning</th>
<th>T(df)</th>
<th>Significance p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>SD</td>
<td>X</td>
<td>SD</td>
</tr>
<tr>
<td>Awareness</td>
<td>2.5</td>
<td>0.53</td>
<td>4.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Learning Strategies</td>
<td>2.01</td>
<td>0.77</td>
<td>4.13</td>
<td>0.07</td>
</tr>
<tr>
<td>Learning Activities</td>
<td>2.2</td>
<td>0.6</td>
<td>4.2</td>
<td>0.46</td>
</tr>
<tr>
<td>Evaluation</td>
<td>2.2</td>
<td>0.5</td>
<td>3.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>2.3</td>
<td>1.0</td>
<td>4.3</td>
<td>0.5</td>
</tr>
</tbody>
</table>

In table 7 independent T test comparison was conducted between the lecture-based learning methods and blended learning to that of the different sections of the outcome variables. There was significant difference between the means of lecture based learning and blended learning.

In all the sections the p value is below 0.05 which shows that the both the learning methods were quite different from each other in terms of student ‘awareness’, ‘learning strategies’, ‘learning activities’, ‘evaluation’, and ‘interpersonal skills.

**Discussion**

Results of the study reject the null hypothesis that there is no significant difference in the blended teaching and lecture-based teaching strategies on nursing students learning outcomes. Because this study results depict that blended learning method is superior to lecture based learning. As significant finding obtained from students undergoing blended learning than lecture-based learning. Similar results were obtained and showed that blended leaning is prioritized on lecture based learning. Study reveal that blended learning encourages students as it promotes students’ critical thinking and learning abilities. Beside this, it is observed that blended learning enhances students’ skills and satisfaction level than other types of learning. Also, blended learning is beneficial to get remarkable outcomes. In comparison to this study, blended learning fosters positive outcomes as students get more scores through blended learning.

Blended learning promotes more group discussion among students than lecture-based learning which is coherent to the study. Furthermore, blended learning is also useful as it leads to a two-way communication process more than traditional teaching method. The findings are also consistent with the study. The result of this study shows that retention of new lessons, enhanced focus on important learning points and comprehension of diversified information were more effective in nursing students in blended learning methods compare to lectured-based learning method. Also, study showed that the effect of the learning rate in blended learning was more than the lecture-based learning method.

The study reveals that blended learning helps to learn about monitoring the goals accomplishment activity during evaluation and finding new learning challenges by appreciating peer feedback. Moreover, in another study who compared blended learning and lecture-based learning on nursing students. The results showed that blended learning had a more impact on students’ learning and behaviour outcome. The importance of blended learning in students’ knowledge acquisition highlighted in the study which described that blended learning help students to relate the knowledge with practice.

In the current study findings reveal that blended learning intensifies student concentration, satisfaction and help to analyse new ideas, information and learning experiences. This enable the students to openly listen others point of view. According to this study students were more satisfied in blended teaching method. In some studies, the students’ satisfaction in blended learning was greater than that in the lecture method. The study showed that the students’ satisfaction in blended teaching method was greater than that in the traditional lecture method.
Students in blended teaching method are provoked with a new kind of educational learning strategies that leads to more inducement, professionalism, contribution, satisfaction and competency. Besides raising the students’ knowledge, theirs’ other skills will be challenged. Students will be encouraged actively to participate in achievement of the required knowledge by blended learning and students are more satisfied with this method in comparison with the lecture method. The positive aspect of this study is the use of modern teaching methods by using blended learning as a useful and efficient tool. In comparison the result of other study showed that the blended learning method is effective in increasing the students’ learning rate. As this method of teaching increases the students’ knowledge, satisfaction and attention16.

There is a statistically significant difference between the achievement of students who used blended learning and the achievement of students who used lecture-based learning supporting the prior group17. The addition of blended learning to lecture based method provides students with opportunities for self-directed learning and a decentralized transfer of knowledge18.

There are few limitations of this study. Pre-existing factors and other influences are not taken into account because variables are less controlled in quasi-experimental research. In addition to this human error also plays a key role in the validity of any project as discussed in previous modules. Moreover, the research must adhere to ethical standards in order to be valid. These will be discussed in the next module of this series.

**Conclusion**

The objective of the study is to determine the difference of blended learning teaching strategy and lecture-based teaching strategy on the learning outcome of the undergraduate nursing students in Lahore, Pakistan. Moreover, to explore the experiences of the nursing students enrolled in blended learning teaching strategy semester and lecture based teaching strategy semester among Generic B.Sc Nursing and Post RN B.Sc Nursing students. In the quantitative analysis the findings revealed that blended learning has significant relationship with awareness, learning strategies learning activities, evaluation among the experimental groups.

**Recommendations**

Following are the recommendations for adoption of the blended learning as a teaching strategy in the institutional and on the national level.

- The regularities should formulate the interventions and evaluation criteria regarding blended learning for the improvement of the learning environment. Ideally, evaluation should take account of, learning outcomes, participants’ learning styles, and motivation, clarity of goals content, interaction, perceived value and satisfaction.
- Where possible, standardized, reliable and valid measures should be employed to facilitate replication and appropriate comparison.
- As with any new approach to delivering learning, comprehensive support for all stakeholders should be available as and when required.

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Exploring the Health Effects of Gender Based Violence on Female Survivors: A Case of Chipata City in Zambia

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Abstract

Social and cultural beliefs in different communities of Zambia have continued to perpetrate Gender Based Violence and this has affected victims in many ways. The impact of GBV has led to an increase in morbidity and mortality rates globally after its physical, mental, emotional and social inflictions on the victims. This has placed a cost on the quality of life as lifestyle changes occur. Therefore, the aim of this study was to establish the socio-cultural factors that are associated with Gender Based Violence in Chipata City. This study adopted an explorative mixed method design. The study sequentially collected quantitative and qualitative data. Responses were gotten from 381 respondents. The sample was deduced from 1,922 female victims were registered from 2014 to 2016 at the GBV One Stop Centre. The discussions about the study revealed that and weak community support, poor relationships, alcohol and poverty, are among the major contributing factors to GBV. The major health effects could be either physical implications like a loss of an organ after assault, unwanted pregnancies and STI infections. Most of these findings were attributed to the spouses/partners. Sensitization, in this case, could be the answer to curb the incidences of GBV. In conclusion, the study explored the experiences female survivors in Chipata city have had following Gender Based Violence. Socio-cultural and economic factors have had a major impact in enhancing GBV and victims mentioned that poverty, substance abuse and inactive law enforcement directly fueled the acts of violence. The key recommendation is massive sensitization about GBV and reinforcing laws to strengthen the curbing of violence.

Keywords: Gender Based Violence, Intimate Partner Violence, Chipata, Zambia, Health.

Introduction

Background and context

Regionally, relationships among people are socially and culturally constructed to become what they are. There are a number of social and cultural factors that surround these relationships, such as taboos, norms, beliefs, values, community, expectation, rules, laws and policies, economic and physical resources, technological and ethical factors (Garcia-Moreno et al., 2015; Jaffe, 2018). These influence an individual’s attitudes towards behavior and their expectation about relationships. Heise and Kotsadam (2015) clearly state the need to constantly work on eliminating negative practices that are seen as a result of relationships. These negative practices can only be remodeled to transform society positively if man is actively involved in sensitization programs. These could change the very core harmful traditional and cultural practices that are related to and promote violence against women.

According to Peterman, Bleck, and Palermo (2015), it is important to address Intimate Partner Violence (IPV) as early as the age of 19 years, in order to prevent it and address it in the at risk groups. This preposition came as a result of the study conducted by Peterman et al. (2015), titled “Age and Intimate Partner Violence: An analysis of Global Trends among Women experiencing Victimization in 30 Developing Countries”. In this study, descriptive evidence argued that the occurrence of first abuse information is lacking and that is why the violence and victimization risks are not properly addressed. Married women ranging from the ages of 15 to 49 were involved in a nationally representative demographic and health survey around 30 countries in Latin America, Eastern Europe, Asia, Africa and the
Caribbean. It was reported that those women who reported intimate partner violence noticed the sad occurrence approximately 3.5 years after marriage and relatively, 1 year after union formation. It is sad to note that even after these findings, no evidence has been published to ascertain the effective interventions that are being conducted to prevent the development of abuse in these unions.

In Sub-Saharan Africa, a study revealed that policies and programs designed to achieve low fertility are challenged by the occurrence of domestic violence in different households (Odimegwu, Bamiwuye, & Adedini, 2015). Women usually submit to marital demands in accordance to societal norms irrespective of their personal health and choice. It is reported that there is higher fertility in women who experience domestic violence as associated to societal values. According to Odimegwu et al. (2015), families usually value the bearing of children without considering the challenges a woman may have and this may lead to violence behavior in cases of refusal to follow laid out norms. Therefore, societal values should be given undivided attention, most especially on the issue of gender equality.

Similarly, there is a strong association that is reported between Intimate Partner Violence and negative health outcomes such as unwanted pregnancies, low access to maternal care, low birth weights and prematurity, still birth and an increase in STIs (Oluwaseyi & Latifat, 2015). Data was collected in a study from 4115 Zambian women and 5234 Malawian women, in order to examine the influence of IPV on use of contraceptives. The study revealed that women who experienced IPV are most likely to opt for traditional approached to family planning (Oluwaseyi & Latifat, 2015). This may be attributed to the desire of most men seeking children and women may feel exposed if they access public medical contraceptive clinics.

This article intends to inform the readers about the socio-cultural factors that are associated with GBV in Chipata City of Zambia. The focus of the study is in Chipata City and this setting can be generalized to the whole of Zambia as the characteristics are very similar.

Problem statement

Gender Based Violence is undoubtedly one of the currently most discussed global health issues many countries are facing. The principal characteristic of GBV is that it frequently occurs against women precisely because of their gender. Although there is a general acknowledgment of the existence of GBV in the Zambian communities, very little research has been conducted to unveil the underlying cultural causes and the consequences of GBV. Therefore, there is need to firstly understand the effects of GBV on female survivors in Chipata city. It is on this basis, therefore, that this study will explore the effects Gender Based Violence have caused on female survivor in Chipata city of Zambia

Objectives

The aim of this article is to determine the health effects associated with Gender Based Violence on the female survivors who were victims to GBV

Significance of the study

This article is justified on the basis of its significance in contributing to the knowledge on effects of Gender Based Violence on girls and women’s health. The article will significantly explore the cultural factors that befall female victims of GBV. Additionally, the knowledge would suggest interventions needed for further management of female GBV survivors, so that they fit into society and represent as meaningful citizens to the fullest.

Furthermore, this study would stand as a founding pillar upon which other studies related to GBV would be built on. The recommendations to be made after this study, if considered, would help government and all other stakeholders to come up with effective policies and intervention measures that will make adjustments to the current socio-cultural orientation which continues to perpetuate violence against women, with a view to reduce GVB incidences and eventual eradication.

Literature review

Gender Based Violence (GBV) can be described as any harm perpetrated against a
person, as a result of power of inequalities that are based on gender roles. According to Krizsan (2018), GBV is all encompassing, as it is not only limited to physical, sexual, and psychological violence, but include threats of coercion or arbitrary deprivation of liberty. Although GBV may take many forms, it cuts across all cultures and disproportionately affect women and children mostly.

Garcia-Moreno et al. (2015) estimated that one in every five women faces some form of violence during her lifetime and in some cases leading to serious injury or death. This is an equally a major threat to social and economic development. Violence against women is mostly widespread and socially tolerated where the female folk are denied their basic right by men who seem to want to control their thinking and deeds. Their choices are limited to an extent where they may unwillingly indulge in activities for the sake of harmony with their spouse.

Parsons et al. (2015) reported that women’s vulnerability to violence is determined by their sexuality which may result in rape, defilement or Female Genital Mutilation (FGM). They also stated that women are expected to satisfy men and not refuse any act of sexual intention on them as a symbol of obedience. A lot of cultural practices occur where the older women prepare the younger ones by mutilating parts of their bodies for the purposes of them satisfying their husband. But little is done on the man when being prepared for marriage.

Duvvuryand colleagues further stated that women are also taught not to answer back their husbands even when they do not agree to any of their ideas and this saddening relationship between men and women is a clear expression of humiliation that has been dominated by certain male egos towards specific vulnerable and helpless women folk.

Additionally, violence against women is reinforced by doctrines of privacy and sanctity of the family and by legal codes which link individual family or community honor to women’s sexuality (Samboko & Dlamini, 2016). Women are expected to behave in a particular manner as they have been made to believe that proper behavior of their part is what forms a stronger foundation for their family. On the other hand, men have a leeway when found misbehaving as their offences are not considered as bad as if it were a woman.

However, the greatest cause of violence against women is government tolerance and inaction (Parsons et al., 2015). Furthermore, Garcia-Moreno et al. (2015) adds that the most significant consequence of governments’ tolerance and inaction toward violence against women is fear, which inhibits women’s social and political participation. In countries where women and girls are well protected from sexual harassment and violence, the cases of GBV may be low. Men may fear facing legal litigations against them if found wanting.

Relationships are socially and culturally constructed surrounded by factors such as norms, beliefs, values, taboos, community, expectations and rules, law and policies, economic and physical resources, technological and ethical factors influence an individual’s attitudes towards behaviors in and expectations about relationships (Heise & Kotsadam, 2015). This is therefore a clear indication that there is a position and significant correlation between peoples’ traditions and socio-cultural beliefs which is seen in the way they behave and act in their different relationships especially within families.

This means that man can be either violent or non-violent to his wife or partner depending on the traditions and socio-cultural beliefs shaping him and his household. Some people, both men and women, do not see anything wrong with wife battering, they embrace it on the premise that it is a means of discipline (Heise & Kotsadam, 2015). Additionally, some women feel that when a man beats them, it is an indication of portraying love.

Garcia-Moreno et al. (2015) explain that rural women are discriminated against in terms of employment opportunities, access to social and productive resources, education, health status and family decisions among others. They are perceived to need a man who must spearhead these activities on their behalf. This has been corroborated by other scholars, especially in African rural communities, where a male children are preferred to be educated if there is limited resources (A Alesina, B Brioschi, & E. L Ferrara, 2016; Decker et al., 2015).

This comes in with the understanding that a female child will be married off and kept by her husband, while the male needs to fend for her
family. Cross-cultural studies indicate that at societal level, the discrimination against women is traceable to male authority and decision making in the home (M. Ellsberg et al., 2015). Additionally, rigid gender roles define masculinity that link male honor or dominance which result in economic inequality between men and women, and the use of physical force for conflict resolution.

In Zimbabwe for example, domestic violence is rampant in the society (Decker et al., 2015). This has disadvantaged women in many ways. The suffering Zimbabwean women endure as a result of social change has weakened the extended family structures and contributed to the notion that male heads of households can do anything they wish to their wives and children (Decker et al., 2015). Men are expected to desire and need sex regularly, but women are punished, if they appeared to enjoy sex too much or if they are thought to be unfaithful.

Women are also expected to be fertile and to bear sons. When this is not the case, such women suffer psychological torture and physical violence from their husbands. This view was supported by Laura Ann McCloskey, Boonzaier, Steinbrenner, and Hunter (2016) that needs and wellbeing of women are relegated and often substituted with the needs of men.

In rural areas in Nigeria, exploitation of women is perpetuated, where the relation-ship between men and women is that of senior-junior (Akande, 2015). This means that the woman is expected to respect man as though it’s their elder and ensure that he is satisfied in all areas. For example, the wife is supposed to submit to sex each time her husband demands it and this is regardless of whether she consents or not.

The other example given by Akande (2015) is that the wife is not supposed to start questioning the husband about his whereabouts, when he comes back home, even if it is late in the night. It is expected for the wife to just wake up and start preparing him a meal without asking where he has been or what he has been doing. Women are made to abide by such cultural norms or else, face the wrath of a man. Men usually are heavily supported by the entire community and this has resulted into a pattern of inequality with their wives.

According to Akande (2015), wife battering is worldwide phenomenon which has been accepted to become part of some African cultures. This is reinforced by the sex role socialization of women, which encourages and emphasizes submissiveness. The woman who is beaten is supposedly being guided or controlled to behave in a certain way. The victim of wife battering remains in the abusive environment because of lack of family and community support. Divorce is not always a viable alternative due to the stigma attached to it thereby leaving women no options but to stay and endure the suffering (Akande, 2015).

Partner violence disclosure remain a difficult decision for many women because of the fear of retribution by the partners in form of more physical abuse and abandonment (Heise & Kotsadam, 2015). The victims of violence do not express their experiences publicly because they fear facing further abuse or being chased from their homes. The men, usually, feel this action as a demeaning act and they dominate on their cultural beliefs where women should be sworn to secrecy. Concealing the information about the Gender Based Violence women experience usually leads to detrimental consequences especially on the health of victims. These women are mostly surrounded with fear as their daily experience has been aligned to being depressed.

These thoughts of injustice trouble their mind and they mostly recline from socializing with significant others (Heise & Kotsadam, 2015). Additionally, the suffering may result into health consequences which may include unwanted pregnancies, abortion effects, sexually transmitted infections like HIV/AIDS or Syphilis, infertility and non-satisfactory sexual lives (Heise & Kotsadam, 2015).

There are legal and socio-cultural systems that work against human rights for women as human beings for example traditional marriages and dowry payments (Simona, Muchindu, & Ntalasha, 2018). In Africa, women are treated like property rather than partners by their husbands.

This observation is reported by Simona et al. (2018) who state that the cultural understanding in most African marriages holds that once dowry is paid on a woman, she automatically becomes the property of the husband. This gives men a feeling and sense of ownership of a woman and they feel superior to women. This has culminated in a husband doing as he pleases while the wife copes with everything.
The independent variable for this study is the Post Gender Based Violence effects which are caused by the dependent variables.

The dependent variables for this study have a direct effect on independent variables and these include

**Societal effects** - In society, there are a lot of influencing factors towards the occurrence of GBV on women. These can vary in accordance to their nature. Women may be in abusive relationships and experience physical abuse where they are involved in fights, being beaten or kicked by their partners. They may also be victims of sexual abuse through forced sex in defilement or rape. In different communities, we find that women are usually economically constrained such that they may fail to fend for themselves and depend on men who will take advantage of their situation. The other societal factor that may influence GBV acts of the intake of alcohol and smoking practices which is common among the men, who in turn become abusive due to their lifestyle effects. Considering that women live in different communities that exist beneath certain beliefs and practices, some socio-cultural factors like upholding men’s positions places women at a lesser position that men. This leads to their abuse in different ways. Religion has not saved the women because according to the spiritual outline, women are expected to be submissive and respectful to men, thereby fail to defend themselves.

**Lack of corrective measures to address GBV** - women may lack support from their families, the police, Victim Support Unit and Religious/traditional leaders, leading to them being vulnerable. Additionally, the society may not be aware of the issues and effects surrounding

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**Source:** Author, 2018
GBV and hence not understand its’ implications. All these factors will lead to women experiencing after effects of GBV because they are eventually exposed to it and face the consequences.

**Current practice that supports violence against women** - Considering that traditional practices are well enshrined in people who have lived with them for a long time, it becomes difficult for them to change their lifestyles. There is a practice that exists under customary law which is common place of justice in most rural villages in Zambia. This customary law will support certain harmful practices like sexual cleansing, widow purification and early marriages because they may not understand the implications of such practices. The police may also seek reconciliation between the perpetrator and the victim without understanding that setting the offender free may influence the behavior to worsen. Zambia is surrounded by different countries where there is unrest and therefore causing the entrance of refugees into its territory. Once they are in the country, these people are housed in refugee camps where a lot of unhuman behaviours may be recorded. Women end up not being protected as men can abuse them in different ways and cause harm to their health. Sometimes, due to poverty levels, people seek greener pastures outside the country and may risk being trafficked by bad people. They may be held captive and forced into different practices like prostitution and stealing. Failure to do this may lead them to be exposed to GBV

**Methodology and design**

This study adopted an explorative mixed method design. The study sequentially collected quantitative and qualitative data. Responses were gotten from 381 respondents. A sequential mixed methods is defined as ‘a research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches in a single study or a program of inquiry’ (R Ingham-Broomfield, 2015, p. 264). The approach helped to gather information that is diverse and rich from both paradigms, unlike if a singular method was chosen. The first study population were females, who are GBV survivors and accessed services at the One Stop Centre from 2014 to 2016.

The second study population were females living in Chipata City who may have experienced GBV but did not access services at the One Stop Center. The first group of respondents were sampled from the population of GBV victims who accessed medical care services from 2014 to 2016. The second group of respondents were sampled from the population of Chipata City female residents who have never accessed services from the GBV center. This study group was deduced from the Central Statistics Office (CSO) data of the total population of female residents in Chipata.

Phase 1 sample consisted of females who interviewed and was derived from the population of all female GBV survivors who accessed care at the One Stop Center from 2014 to 2016. According to the information collected in the One Stop Center register, a total of 1,922 female victims were registered from 2014 to 2016. The sample sized was deduced to be 331. Phase 2 sample size comprised females residing in the urban area of Chipata City. These were GBV survivors who may or may not have accessed care at the GBV center. Since the number of females living in Chipata urban was not known, the study targeted only 50 interviews with the survivors.

The questionnaires were used to collect data from the females living in Chipata City as a means of collecting reliable and meaningful data that may be missed if the study was limited to those who had the courage to report at the GBV center. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) and Microsoft excel in order to generate tables, graphs and percentages for easy interpretation. Descriptive tests such as the mean, frequencies, standard deviations were used to assess the various central and dispersion tendencies of the variables. Furthermore, the non-parametric chi-square test were used to assess the association of variables.

Qualitative data was analyzed by free form thematic analysis that enabled the researcher after to examine the sentences line-by-line. The words and phrases were closely examined so that the researcher understands the underlying meaning and translated them into codes that interpreted the emerging thoughts.
Findings and discussion

Health Effects of GBV

Table 1. Health consequences of GBV

<table>
<thead>
<tr>
<th>Questions</th>
<th>Not Applicable</th>
<th></th>
<th>No</th>
<th></th>
<th>Yes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV as a result of GBV</td>
<td>1</td>
<td>2%</td>
<td>37</td>
<td>74%</td>
<td>12</td>
<td>24%</td>
</tr>
<tr>
<td>Have you enrolled for ART</td>
<td>38</td>
<td>76%</td>
<td>2</td>
<td>4%</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>STI as a result of GBV</td>
<td>3</td>
<td>6%</td>
<td>34</td>
<td>68%</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>Where you treated for STI</td>
<td>35</td>
<td>70%</td>
<td>4</td>
<td>8%</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>Fallen pregnant as a result of GBV</td>
<td>1</td>
<td>2%</td>
<td>43</td>
<td>86%</td>
<td>6</td>
<td>12%</td>
</tr>
<tr>
<td>Abortion due to GBV</td>
<td>2</td>
<td>4%</td>
<td>38</td>
<td>76%</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Neglected child after birth</td>
<td>2</td>
<td>4%</td>
<td>44</td>
<td>88%</td>
<td>4</td>
<td>8%</td>
</tr>
</tbody>
</table>

The findings show that 74 percent of the respondents had not contracted HIV as a result of GBV, 20 percent had enrolled for ART as a result of GBV, 26 percent had an STI as a result of GBV, 22 percent were treated for an STI, 12 percent had fallen pregnant as a result of GBV, 20 percent had an abortion due to GBV, only 8 percent had neglected their child after giving birth.

Table 2. Multiple questions

<table>
<thead>
<tr>
<th>Questions</th>
<th>Not Applicable</th>
<th></th>
<th>No</th>
<th></th>
<th>Yes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Admitted to a mental institution</td>
<td>1</td>
<td>2%</td>
<td>36</td>
<td>72%</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>Mental treatment</td>
<td>1</td>
<td>2%</td>
<td>35</td>
<td>70%</td>
<td>14</td>
<td>28%</td>
</tr>
<tr>
<td>Feel depressed on GBV encounter</td>
<td>1</td>
<td>2%</td>
<td>14</td>
<td>28%</td>
<td>35</td>
<td>70%</td>
</tr>
<tr>
<td>Contemplated suicide at one time result from GBV</td>
<td>1</td>
<td>2%</td>
<td>27</td>
<td>54%</td>
<td>22</td>
<td>44%</td>
</tr>
<tr>
<td>Thought of killing the abuser</td>
<td>1</td>
<td>2%</td>
<td>40</td>
<td>80%</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td>Victimized</td>
<td>2</td>
<td>4%</td>
<td>16</td>
<td>32%</td>
<td>32</td>
<td>64%</td>
</tr>
<tr>
<td>Crippled as a result of GBV</td>
<td>1</td>
<td>2%</td>
<td>40</td>
<td>80%</td>
<td>9</td>
<td>18%</td>
</tr>
</tbody>
</table>

The table shows that the 72 percent disagreed that they were admitted to a mental institution, 70 percent denied being on mental treatment, 70 percent agreed to being depressed on GBV encounter, 44 percent contemplated suicide at one time as a result of GBV, 80 percent disagreed to thinking of killing the abuser, 64 percent agreed to being victimized, and 80 percent said no to having been crippled as a result of GBV.

On ART

Figure 2. On ART
The results showed that the majority were on ART medication (83 percent) while only 17 percent were not on ART medication according to the findings in the pie chart above

Negotiate Condom Use

![Pie chart showing 33% yes and 67% no for Negotiate Condom Use]

Figure 1. Negotiate the use of condoms with spouse

The findings were that 33 percent of the women negotiated with the use of condoms while 67 percent said no to negotiation.

**Qualitative findings**

The qualitative findings showed the health effects of GBV included physical and psychological.

**Consequences suffered following gender-based violence experience**

The theme “consequences suffered following Gender Based Violence experience” was built upon the subtheme: physical health effects of Gender based violence.

**Subtheme 1. Physical health effects of GBV**

Many participants expressed that they had faced some body effects such as the loss of an eye, and a limb as stated in the following statements by the participants:

- Participant No 252: *I was badly beaten by my spouse such that my left eye was affected. Now my eye cannot function properly.*
- Participant No 124: *I am not able walk properly because my leg was hurt by my spouse*
- Participant No 214: *I am now on treatment because of the sickness I was given*

The above statements are from respondents who stated that they have been victims of rape and sexual abuse thereby contracting STIs. The findings also indicate that GBV has truly affected the victims in many ways.

**Subtheme 2. Psychologically traumatized after the GBV experience**

Some participants expressed psychological disturbance after a GBV experience in the following expressions:

- Participant No 213: *He left me with a psychological trauma*
- Participant No 37: *I was traumatised*
- Participant No 38: *It was a bad experience such that I thought I have no future left and I felt emotional damage*
- Participant No 18: *It was so bad that I could not walk in public in fear of people laughing at me*

**Discussions**

In this study, the investigator reports that some respondents indicated a loss of some body organs like a limb or an eye due to physical abuse. 24% mentioned that they were infected with the HIV in the process of being sexually abused and were now on ART therapy (check table 2 Health Consequences of GBV). According to Mathur et al. (2018), 19.1% and 22.2% of the respondents from Kenya and Zambia, respectively, reported sexual violence from their partners. While on the other hand, 21.4% and 16.9% from Kenya and Zambia respectively, reported sexual violence from non-partners. Mathur et al. (2018) reports
that these experiences have led to increased levels of depression and anxiety, plus Sexually Transmitted Infections. This could have also led to the increased HIV risk perception from non-partners. It was noted that most of the respondents who contracted STIs (26%) would have been violated through rape by either their spouse, relatives or strangers.

According to Decker et al. (2016), in a study done in Cameroon among Female Sex Workers (FSW), it is reported that violence is an inevitable experience for the FSW who eventually fail to access health care services and protection. The nature of the FSW’s profession exposes them to be in compromising situations and places where men easily violate them and force them to do practices contrary to their will. Decker et al. (2016) mentions that these women fail to successfully negotiate the use of condoms during some of the sexual encounters and this ultimately predisposes them to contracting sexually transmitted infections, even HIV. This is also found in this study where 33% of the respondents confirm that it is difficult for them to negotiate condom use with their spouses/partners (check figure 8). Subsequently, they become liable to accessing treatment for STIs or Anti-Retraval Viral therapies later in life, which affects them for a lifetime.

The Australian context revealed that reproductive women aged from 15 to 44 reported that 7.9% of most of their health problems were related to Intimate Partner Violence (Laura A McCloskey, 2016). Notably, Laura A McCloskey (2016) reports that GBV impacted the respondents to the study in different ways which included repeated frequent unwanted pregnancies of which some resulted into abortions in some adolescents and early teenage bearing from incidences of incest. These findings are in line with the study results which reveal that 20% of the respondents have had abortions due to GBV. 70% feel depressed after a GBV encounter and they may end up being hospitalized or seeking mental treatment (26%).

**Recommendations**

Based on the study findings and conclusions, the following recommendations are suggested to the following stakeholders.

**Health care provider implications and recommendations about the findings of the study**

The study findings clearly indicate that there is a lot to be done in terms of GBV. Some points are outlined below which will directly have an impact on the nursing profession.

1. GBV clients clearly need holistic approach in care and the concept mapping model would be recommended. These are clients who may be suspicious and need to be involved in any issues surrounding their health and welfare. In concept mapping, Aberdeen (2015) state that the health care team and the patient are involved in looking at each human system to identify needs from the client’s strengths and issues. Therefore, it unveils issues which even the client may not be aware of and these can be addressed. The involvement of the client ensures that she understands her situation clearly and supports the health care team and they seek for solutions for the client.

2. GBV is a public health issue which entails that there is need to train more public/primary health care nurses who work close to the communities. They could be a quick source for addressing a lot of GBV issues, and even preventing them before fatal consequences are experienced.

3. There is need for all health workers, especially the nurses who are the first contact with clients, to be trained comprehensively in Gender Based Violence. With the knowledge, they will be able to identify and respond promptly to GBV issues.

4. Nurses also need Integrated Reproductive Health so that they can give services to the survivors who majorly undergo sexual abuse.

**Community**

The community has been noted as a central place were GBV occurs. Some respondents have indicated that the perpetrators are let lose by the community. In this regard the community should:

1. Ensure that they encourage victims to go the police and GBV one stop centre. This will ensure that GBV is countered collected thereby alarming the community at large.

2. Should be proactive in ensuring that GBV awareness is talk about in the community meetings and homes.

3. Encourage spouses to be protectors of their wives and female children in order to reduce the occurrence of GBV.

4. need for generation of micro-economic programs that will empower women.
Victims of GBV

Despite the pain and harm endured by the victims of GBV, the study recommends that
1. Need for intensifying national wide sensitization and behaviour change campaigns related to the dangers of GBV. 
2. GBV victims should visit the one stop centre where they can share their experiences about GBV with other partners. This will lead to having a more open community and free to communicate about these problems.
3. The GBV victims should start creating support groups that will make sure that the victims are able to heal through the process.

References


Student Nurse’s Clinical Learning Environment: Clinical Teachers’ Perspective

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Abstract

The study attempted to answer the following research questions: what factors influence student nurses’ clinical learning during their clinical practice allocation and how does clinical learning environment influence student nurses learning? A phenomenological approach methodology was used to conduct the study. Eight clinical teachers at Rusangu University in Monze participated in study. The findings showed that study participants provided teaching and learning support to student nurses on attachment and integrated theory into practice by either discussing conditions or observing and demonstrating procedures when students were in the clinical areas. They also stated that communication was also good among the school staff and students. The study revealed that students face challenges during students’ placements in their respective clinical sites. The main challenges included lack of medical surgical supplies, equipment and stationary and students congesting the ward coming from different schools of nursing. This made teaching and learning for student’s difficulty. The study suggests a necessity to use to look into the challenges faced by the clinical teachers in order to facilitate learning in clinical practice and creating a conducive clinical learning environment.

Keywords: Student nurses, Clinical learning environment, clinical teachers, Perspective.
study. The participants were asked of their consent and were assured of the confidentiality of the information to be shared. Especially on having to audiotape the interviews, they were requested to sign a consent form. Emphatically, their right on having to withdraw at any stage of the study was stressed. The study was conducted after approval was obtained from ERES converge (Research Ethics Committee) and in addition permission to conduct the study was obtained from Dean of the Faculty of Nursing and Midwifery.

Results and discussion

Demographic data of the participants

A sample of 8 Clinical supervisors was chosen for the study. This consisted of (5) females and (3) males. (7) Participants were nurses and (1) was a clinical officer. Their ages ranged from 25 to 45 and their work experience ranged from 5 years to 25 years. Narrative interviews were conducted by the researcher. During the interviews four major themes emerged from the discussions on factors influencing student nurse’s clinical learning during their clinical practice. These included teaching and learning support provided to student nurses on attachment, integration of theory into practice by the clinical educators, interpersonal relationships among school staff, students and clinical staff and challenges affecting student learning in the clinical areas.

Teaching and learning support provided to students’ nurses on attachment

The support given to students by the nursing staff in the clinical setting plays an important role in the achievement of their learning objectives (Chaun and Barnett, 2012, Nash et al 2009, Dube et al, 2018). Support from nursing staff in the clinical area can be a source of motivation to nursing students as they feel welcome and apart of the team, thereby helping them with learning (Murphy et al 2012, Kelly, 2006). Many participants expressed that they provided teaching and learning support to student nurses on attachment. This is reflected in the following statements by two participants:

“I also observe and explain procedures for students when they are with me”. (Female x Book

Integration of theory and practice

According to Vermaak (2013), integration of theory into practice is cardinal in nursing education for the development of competences and critical thinking and it is a reason for clinical placement. However, integration cannot be possible without a conducive clinical learning environment. All the participants indicated that they integrated theory into practice by either discussing conditions or observing and demonstrating procedures when students were in the clinical areas. Bedside teaching and demonstrations on actual patients help students to integrate theory into practice as stated by one participant in this narrative:

“When students are in the clinical areas, we conduct bedside teaching and do demonstrations on patients”. (Female Participant).

Interpersonal relationship and communication between school staff, students and clinical staff

Research has demonstrated that an effective learning environment requires good communication and collaboration between the student, mentor, unit manager, clinical facilitators (Vermark, 2013). Poor interpersonal relation- ships with clinical staff and preceptors can be barriers to learning within the clinical environment (Melincavage, 2011, Shabana et al, 2012, Lawal et al, 2015), however, most of the clinical supervisors in this study said that they had a good relationship with both the school staff and students. They also stated that communication was also good among the school staff and students. This is expressed in the following statement by one participant:

“Yes, we enjoy a good relationship and communication with the school staff as well as the students.” (Female participant).

Challenges affecting student learning in the clinical areas

The findings show that students face challenges during students’ placements in their respective clinical sites. The main challenges include lack of medical surgical supplies,
equipment and stationery and nursing student congestion in the clinical areas. This made teaching and learning for student’s difficulty. This is indicated in these responses:

“Okay challenges are many, for instance most of the times we lack medical and surgical supplies, stationary for recording findings like partographs and equipment to use on the wards. Most of the times we have to improvise”. (Male participant).

“One of the challenges is that there too many students in the on the wards coming from different schools of nursing and we are not sure if they learning anything.” (Female participant).

Existence of barriers to effective clinical practice have also been reported in other studies (Gumuhay, 2019, Awuah-Peasah et al, 2013).

Conclusion and recommendations

Clinical practice provides opportunity for students to apply the theory to practice. Clinical experience enables nursing students to gain essential skills and provide safe and quality nursing care through real life practice. The findings showed that study participants provided teaching and learning support to student nurses on attachment and integrated theory into practice by either discussing conditions or observing and demonstrating procedures when students were in the clinical areas. They also stated that communication was also good among the school staff and students. The study revealed that students face challenges during students’ placements in their respective clinical sites such as lack of medical surgical supplies, equipment and stationery and students congesting the ward coming from different schools of nursing. Taking these factors into consideration would help students develop psychomotor skills and adapt to the professional role.

Acknowledgements

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Authors’ contribution

BK conceptualised the study, collected data, analysed data and drafted the manuscript. CMN supervised the research process and approved final version of the manuscript.

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Effects of Postoperative Care Program on Leg Pain and Functional Performance after Lumbar Spine Surgery

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Abstract

Main objective: To investigate the effects of postoperative care program on leg pain and functional performance after lumbar spine surgery at Nakhon Phanom Hospital.

Method: This was experimental research used a pretest-posttest for the 2 groups, which was done before and after to determine the effects of postoperative care program on leg pain and functional performance after lumbar spine surgery. This study performed on 40 patients who received lumbar spine surgery. Data was collected using the numerical rating scale and the postoperative functional performance questionnaire.

Results: The findings showed that the experimental group who received postoperative care will have reduced leg pain and better postoperative functional performance improvement than the control group (\(p<0.005\) and \(p<0.001\), respectively).

Conclusion and recommendation: Postoperative care program in combine with medical treatment reduced leg pain and yielded beneficial effects on some aspects of postoperative functional performance among lumbar spine surgery.

Keywords: Postoperative care program, Leg pain, Postoperative functional performance, Lumbar spine surgery.

Introduction

Lumbar spinal surgery is a treatment for spinal diseases patients experiencing back pain and acute leg pain from lumbar herniated nucleus pulposus \(^{1,2}\) resultant of surgery for removal of the rear of the spine. The spinal cord is opened to reduce compression on the spinal cord \(^3\). Consequently, patients suffer from surgical pain post-surgery. Postoperative symptoms are caused by nerve injury resulting in acute back pain running to one leg or both. \(^{3,4,5,6}\) Moreover, statistics have shown that spinal surgery in the United States in 2006 was 169 cases per 100,000 population. Then, this figure increased in 2011 to 252 cases per 100,000 population. \(^7\) At Nakhon Phanom Hospital, many patients with lumbar herniated nucleus pulposus have been admitted for treatment. Some patients have been successfully cured by surgical treatment resulting in a continual increase in the number of lumbar spinal surgeries. \(^8\)

The impact of leg pain post-surgery can render difficulties in terms of carrying out activities during the postoperative period. These patients present limited self-care, both in terms of movement and routine activities - more so than other postoperative patients. Such symptoms can affect the patient directly in regards to their body, mind and quality of life. \(^2\) A study concerning postoperative spinal surgery patients revealed that leg pain from sciatica and the limitation in the ability to bear pain were correlated. The limitation in the ability to bear pain can be used to predict physical health status as well as sciatica. \(^9\) The related symptoms affect not only the body and the psychosocial, but also the economy. Healing prior to and post-surgery are rather time consuming. Consequently, this affects the cost of ongoing
treatment: these costs have continually increased. (4)

Thus, the researchers have concerned with the importance of relieving leg pain post lumbar spinal surgery through a therapy program employing post-surgery self-care comprising of postoperative self-care teaching, promotion of daily practice and exercise. Thus, postoperative self-care program is a convenient and safe method for application. Indeed, patients and their relatives could perform these methods at home. The study’s findings could be nurses play a significant role amid health prevention and promotion which is of importance to patients. Consequently, postoperative activities have led to the development of guidelines for the recovery of patients.

Aim of the study

The aim of this study was to compare the effects of postoperative care program on leg pain and functional performance between the patients in the experimental and control group.

Hypothesis

-Hypothesis was after receiving the intervention program that the experimental group will have reduced leg pain compared with those in the control group.

-Hypothesis was after receiving the intervention program that the experimental group will have better postoperative functional performance improvement than those in the control group.

Significance of the study

As mentioned above, it can be seen that leg pain - both preoperative and postoperative continuously render the effect of suffering on the health, physical, mental, economic, and social condition, and consequently, quality of life among patients. This was probably due to the program activities providing a myriad of knowledge regarding spinal surgery, postoperative symptoms, postoperative self-care, avoidance activities, and proper posture. What’s more, the demonstration of exercises for the back and leg muscle enabled patients to follow appropriately, which presented the ability to further increase flexibility in the leg muscles. This also projects itself for the enhanced performing of other activities. (9)

Materials and methods

Participants

Patients exhibited both types of surgery, that is to say, who had undergone lumbar spine surgery with internal fixation using plates and screws and with general anesthesia at the orthopedic ward, Nakhon Phanom Hospital. The sample characteristics were as follows: aged 20 years and above, had experienced one occasion of spinal surgery, had not been diagnosed as a cancer patient, had a good sense of consciousness, and able to communicate and understand Thai. Those with spinal injuries were not considered for inclusion. Subjects consented to participate in the research and made themselves available for follow-up visits. The criteria for subjects to cease participation during the trial period would be in the case of severe complications such as repeat surgery, complications concerning diseases, for instance, heart disease, abnormal sensations, varicose veins in the legs or calves, burning sensation in the legs after surgery, numbness and weakness in the legs and unable to participate in the research at all.

Calculation of sample size in this study was calculated as follows: we did not know the figures relating to the population group, therefore, the calculation of the sample employed G * power 3.1.9.2, computer program to determine power of test at .80 le, and significance level was determined at .05 (α = .05). The literature review revealed no effect of population size in the studied variables. Consequently, the influence size of the effect size was determined using the middle effect of small effect dimension and medium effect dimension (d = 0.35). (10) The initial sample number was 52 persons selected via purposive sampling and random sampling by drawing lots. Accordingly, 52 patients qualified for the sample of which 12 were removed due to repeat surgery. Therefore, 40 subjects were included and divided equally into two groups: experimental and control group. The data were collected from November 2016 to January 2018.

The research instruments

The research instrument consisted of 2 parts.

Part 1: Instruments employed to collect data:
1.1 General records of personal data and illness information including age, sex, education level, occupation, family income, underlying disease(s), medical history, surgical experiences, postoperative diagnosis, types of surgery, duration of surgery, size of surgical wound, and receiving of pain relief.

1.2 An evaluation form for leg pain post-surgery was applied from the symptom evaluation form of Numerical rating scale (NRS). As a consequence, patients were evaluated for leg-pain symptom frequency. Accordingly, scores ranged from 0-10 points as follows: 0 points: no pain and 10 points: the most pain. The researchers allowed the samples to respond to the frequency of the symptoms by dividing scores from 0 to 10. A lower score indicated that leg pain was mild in nature.

1.3 An evaluation from in relation to Postoperative Functional Performance of Lumbar spinal surgery was developed from a guideline for surgical patients with spinal surgery, care of the Neurological institute, and from the theory of Unpleasant Symptoms by Lenz et al. Questions were 26 items including, daily activities: 10 items (ADL), 6 items relating to social activities and other interactions, and rehabilitation activity practice to promote recovery after spinal surgery patients (10 items). Responses were obtained via 5-level answering system as follows: 0 points was interpreted as the patient being unable to practice, 1 point was interpreted as the patient was able to practice yet he/she did not practice, 2 points was interpreted as that the patient was able to practice sometimes, 3 points was interpreted as that the patient practiced almost every prescribed time, and lastly, 4 points was interpreted as that the patient was able to practice every prescribed time. Rankings were criterion based. Interpreting class calculation was reached by the maximal mean score minus the minimal mean score; then it was divided by the number of ranges. Thus, mean score range was 0-4A high score meant a high level of postoperative activity practice. A low score determined a low level of postoperative activity practice.

Part 2: Study instruments employed for experimentation:

2.1 Regarding postoperative care program for lumbar spinal surgery patients, the program was set for 4 practice occasions. The first occasion was started on the third day post-surgery. The program began with surveying the list of lumbar spinal surgery participants at the orthopedic ward, then, the researchers took 30 minutes to select the patients according to individualized qualities. Following that, the researchers greeted participants, introduced themselves, informed participants of the research objectives, and clarified the subjects’ rights in regards to the study. The sample signed the consent forms and lastly, general data were collected from history records and patient response.

The second step was run on the fifth day post-surgery during the first week. The researchers made an appointment date and time to visit patients’ homes individually in order to create closer relationships with patients and their relatives. Additionally, assessment of patient readiness was conducted by utilizing a postoperative self-care handout relating to the postoperative care program. Then, the researchers provided knowledge on postoperative self-care, including: self-care at home, avoidance activities and proper posture. Moreover, a demonstration on exercising the back and leg muscles was performed, with patients encouraged to follow the demonstration. Consequently, the patients were praised for their participation. After that, evaluation was conducted via the post-surgery leg pain evaluation form. Post-surgery activity practice was also evaluated.

The next occasion for experimentation fell on days 6-11 post-surgery with patients recommended to administer back and leg muscle exercises. The patients practiced on their own accordingly by administering back and leg muscle exercises together as prescribed on each day. The researchers called the patients as a follow-up in relation to the aforementioned practice methods, and recorded the data together. Additionally, the patients were asked about any problems faced during practice. Words of encouragement and praise were given to the patients once they were able to practice each method correctly. Also, finding solutions together would take place if there was a problem. This process took about 20 minutes.

Then, on the fourth occasion after surgery on day 12, the researchers performed home visits again. Subsequently, for an hour, patients completed two forms: The Post-Surgery Leg
Pain evaluation form and the Postoperative Functional Performance of Lumbar Spinal Surgery evaluation form

2.1.1 Handouts with illustrations and lectures for the experimental group contained knowledge regarding spinal surgery, postoperative symptoms, postoperative self-care, and treatment of various symptoms. Review of relevant textbooks and research papers.

2.1.2 Postoperative care form recorded consecutively for seven days.

Quality inspection of instruments

1. The instrument reliability process was conducted as per the following. The instruments used to collect data included the Post-Surgery Leg Pain evaluation form and the Postoperative Functional Performance of Lumbar Spinal Surgery evaluation form. The instruments applied in this study also incorporated the postoperative care program for persons undergoing lumbar spinal surgery as mentioned. The program’s reliability of content was inspected by five experts, namely, one orthopedic physician, two orthopedic nurse lecturers, one traditional Thai physician and one orthopedic nurse. The content validity index (CVI) of Numerical rating scale was 1, and the Postoperative Functional Performance of Lumbar spinal surgery evaluation form was .91, with the postoperative care program at .9.

2. The instrument reliability process was conducted as follows: postoperative care program for lumbar spinal surgery patients, Post-Operative Leg Pain evaluation form, and evaluation of post-operative activity practice for lumbar spinal surgery patients. Once content had been checked for reliability, the researcher considered suggestions to improve instrument reliability. The process was then trialed with 10 lumbar spinal surgery patients demonstrating similar characteristics to the sample. The Post-Surgery Leg Pain evaluation form was tested for reliability utilizing Test-Retest Reliability. In addition, the form evaluated cognitive symptoms twice, comprising of an interval duration of 4 hours. Correlation coefficient was .99. The Postoperative Functional Performance of Lumbar Spinal Surgery evaluation form was evaluated for calculation via Cronbach's Coefficient Alpha. Coefficient of Internal consistency was .76.

Protection of the Rights of Human Subjects

Approval by an ethics committee from Nakon Phanom Hospital (IEC-NKP1-No. 55/2559).

Data collection

1. The researchers surveyed a list of patients who had undergone spinal surgery at the orthopedic ward of Nakon Phanom Hospital. The sample was selected based on determined characteristics via the simple random method. Those who had previously had surgery for lumbar spinal surgery were involved every day Monday – Friday and were randomized by drawing lots. Patients drawing the number 1 were grouped into the experimental group, and those drawing the number 2 made up the control group. Then, the researchers met the sample to first, introduce themselves, and second, inform subjects of the research objectives.

2. The researchers clarified the process of research conduction. Following that, the sample were invited to join the research. On accepting invitation to participate, subjects were requested to sign a participation consent form.

3. The researchers collected the necessary data from patients’ medical histories as well as patient-response. Appointments were then made for home visiting on the fifth day after surgery. The experiment was conducted as per the following. For the experimental group, the sample was requested to perform the postoperative care program. As for the control group, the initial home visit took place on the fifth day post-surgery, taking around 30 minutes. Afterwards, the patients filled in the Post-Surgery Leg Pain evaluation form as well as the Postoperative Functional Performance of Lumbar spinal surgery evaluation form. Patients in the control group were routinely treated, as.e. normally without nursing and family therapy. Next, the researchers appointed subjects to return home for another 7 days and complete the Post-Surgery Leg Pain evaluation form in addition to the Postoperative Functional Performance of Lumbar Spinal Surgery evaluation form. The trial was then ended.
Results and discussion

1. Participant Characteristics

Characteristics of personal information, illness information, and sample treatment. Personal characteristic information concerning the sample was described as follows. The majority of the sample in the experimental group were male (60%) and the control group was split evenly between males and females: 50% and 50%, respectively. The age ranges of the experimental and control groups were (Mdn = 50.0) and (Mdn = 56.0), respectively. The majority education level of both groups was primary level: 95% in the experimental group and 75% in the control group. Duration of current episode in the experimental group and control groups were (Mdn = 13.0) and (Mdn = 12.0), respectively.

With regards to information on illness and treatment of the sample; the experimental and control groups were for the most part diagnosed with spinal stenosis L4-5: 70%, and 60%, respectively. Both groups had been operated on via decompressive laminectomy incorporating posterolateral lumbar fusion with pedicular screw: 75% and 60%, respectively. Duration of surgery was Mdn = 125.0 in the experimental group, and Mdn = 130.0 in the control group. Surgical wound size was Mdn = 14.5 in the experimental group and Mdn = 14.0 in the control group. In terms of the results concerning personal information and characteristic information on illness and treatment in both groups, it was concluded that both groups were not significantly different.

2. Comparison of postoperative care program for postoperative leg pain in both groups from the Numerical rating scale showed that both groups were significantly higher (p < 0.001) in regards to leg pain scores on the fifth- and eleventh-days post-surgery, as demonstrated in Table 1.

3. Comparison of postoperative care program postoperative functional performance between groups revealed that postoperative functional performance in both groups were significantly higher (p < 0.005) after taking a postoperative care program on days five and eleven post-surgery. as shown in Table 2.

Discussion

The study of the postoperative care program with leg pain for lumbar spinal surgery patients after postoperative care program on the fifth and eleventh days found that leg pain score was lower in the experimental group than control group (p< .001). It was indicated that exercise was a promotion and rehabilitation to relieve leg pain. It could increase the strength of the involved muscles turn to strength. Thus, it could support for doing activities better and adding more movements. Also, it could reduce the disability that may occur. (15) Moreover, a previous studied with a program of physical activity in daily living at the home of the elderly found that during in the experimental period of 8 weeks, the experimental group had behavioral habits of daily activities and physical fitness, including the strength of the hands and legs muscles, degrees of motion of joints were higher than the compared group. There was a statistically significant difference at p <0.001. (16)

The study results of the postoperative care program with postoperative lumbar spinal surgery effectively demonstrated postoperative functional performance after postoperative care program on the fifth and eleventh days - meaning that the experimental group performed better than the control group (p < 0.005). This was probably due to the program activities providing a myriad of knowledge regarding spinal surgery, postoperative symptoms, postoperative self-care, avoidance activities, and proper posture. What’s more, the demonstration of exercises for the back and leg muscle enabled patients to follow appropriately, which presented the ability to further increase flexibilitly in the leg muscles. This also projects itself for the enhanced performing of other activities. (17) The duration of nerve injury in the spinal column was also decreased. (18) Suffering caused by various symptoms decreased and hence, comfort increased. As a result of this study, patients could perform postoperative functional performance in their entirety, and thus reduce their dependence on others. (9) Besides that, a study by Rungsawang et al. (19) focused on the health condition of patients with chronic lower-
back pain prior to and post-spinal surgery for 6 weeks in 69 persons. Accordingly, it was discovered that lower-back pain and postoperative limitations affected daily living practices, religious practices, and participation in various social activities.

This study is consistent with the Theory of Unpleasant Symptoms by Lenz et al. The situation factor is that the postoperative care program can be used to promote daily activities and postoperative functional performance whereby incorporating excellent benefits among patients who have previously undergone lumbar spinal surgery.

**Table 1. Postoperative leg pain by mann whitney U test**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental group (n = 20)</th>
<th>Control group (n = 20)</th>
<th>P- value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mdn (IQR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*leg pain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 5</td>
<td>4 (3.25 to 5)</td>
<td>5 (2.25 to 6)</td>
<td></td>
</tr>
<tr>
<td>Day 11</td>
<td>1 (0 to 1.75)</td>
<td>3 (2 to 3)</td>
<td></td>
</tr>
<tr>
<td>Scale difference Day 5 and Day 11</td>
<td>-3 (-3.25 to -3)</td>
<td>-2 (-0.25 to -3)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

* Numerical rating scale, ranges from 0 to 10.

**Table 2. Postoperative functional performance by mann whitney U test**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental group (n = 20)</th>
<th>Control group (n = 20)</th>
<th>P- value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mdn (IQR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Functional Performance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 5</td>
<td>62 (53.5 to 75.24)</td>
<td>55 (45.50 to 70.50)</td>
<td></td>
</tr>
<tr>
<td>Day 11</td>
<td>90.5 (80.5 to 96.0)</td>
<td>77.5 (60.25 to 87.25)</td>
<td></td>
</tr>
<tr>
<td>Scale difference Day 5 and Day 11</td>
<td>28.5 (27 to 20.76)</td>
<td>22.5 (14.75 to 16.75)</td>
<td>0.005</td>
</tr>
</tbody>
</table>

* Postoperative Functional Performance, ranges from 0 to 104.

**Recommendations and use of research results**

1. This research can be applied to develop other therapies
2. The results of this research can be used as examples of research amid teaching and innovative nursing.
3. This research may be further developed for other studies of disease, such as for back pain and leg pain, in elderly osteoarthritis patients or among those suffering with work-related pain.

**Acknowledgements**

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**References**

Knowledge of Nurses in Holistic Care of a Child with Delayed Developmental Milestone and Cerebral Palsy

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Abstract
This capstone project is to wrap up three blocks - Medical/Surgical nursing, Maternal and Child health nursing and Mental Health Nursing. Using a case study of nineteen months old male child hospitalized with Delayed Developmental Milestone and Cerebral Palsy; a three-segment self-structured survey was carried out to elicit the Knowledge of Nurses on the Holistic Care of a Child with Delayed Developmental Milestone and Cerebral Palsy. Data collated from 24 Registered Nurses revealed 83.3% are conversant with Delayed Milestone, 54.2% of nurses are not aware of the services to be rendered to a child in need, only 33.3% correctly listed other facilities and services for the holistic care. 66.7% are aware of their role in influencing the treatment protocol, 62.5% have nursed a child with Milestone delay, while 45.8% Cerebral Palsy. Only 25% correctly completed the third segment of the survey that expressed their knowledge in writing despite their experience and qualification, which may limit their skill in early identification of delayed milestone. Most experts agree that the earlier the diagnosis for Cerebral Palsy, the better. Thus the need for nurses to upgrade themselves to enhance early identification and referral of such problem for early developmental milestone screening, diagnosis, treatment plan, and early intervention to achieve an overall holistic care and development of the child; and increases the family chances of qualifying to get support measures from the government and non-governmental agencies.

Keywords: Nurses knowledge, Holistic Care, Development Delay, child, Milestone, Cerebral Palsy.

Introduction
The scope of this capstone 2 project is a wrap up of Medical and Surgical Nursing; Maternal and Child Health Nursing; and Mental Health Nursing. Maternal and Child Health entails - Midwifery the health science that deals with pregnancy, child birth, post-partum period and care of the new-born. While - Child health: which is a part of Pediatrics that anticipate the new born to grow to a healthy adult, thus expects the nurse to possess a comprehensive background on all aspects of children and an understanding of child growth and development.

Mental Health Nursing is concerned with Neurological disorder involving the brain, spinal column or nerves. This can affect the control of movement, communication, hearing, vision, and thinking. Promotion of mental health could be achieved through early detection of mental health problems, using Mental Status Examination to elicit, attitude, comprehension, motor activity, special manner, speech, cognition, and intelligence. The use of multidisciplinary approach (Psychiatric nurse, social worker, occupational therapist, Diversional play therapist, Psychotherapist and so on) coordinating creates a therapeutic environment.

Medical and Surgical Nursing ensures the nurse recognizes her client as the functional and central focus of delivering nursing services, as such, she serves as an advocate to the client and significant others. As a Medical Surgical Nurse she is to promote, restore, and maintain the clients’ health. To do this, clinical skills, knowledge and standard of care are required in nursing assessment, diagnosis, outcome identification, planning, implementation and evaluation; which is used in the treatment of potential and actual human responses to functional abilities and lifestyle.

Knowledge of Nurses in Holistic Care of a Child with Developmental Milestone and Cerebral Palsy on a cross-section of nurses working in a labour supply and contracting firm
J & Amafel in Southern Nigeria was born out of curiosity to determine if the nurses are aware of the condition of a nineteen months old male child (appears as six months) who was hospitalized with Delayed Developmental Milestone and Cerebral Palsy. The child has not started rolling side to side while in bed, has not sat down, stood up or taken his first step, he has not smiled or babble any word apart from crying; Although it is expected of him to have attained these milestones by his age. Cases of children with delay development may not be regularly hospitalized in the facility; however, I have come across eight cases on outpatient and in-patient bases in the course of my career in the same facility.

A three segment self-structured questionnaire survey with outcome of respondents level of agreeing and disagreeing to nursing care and arrangement of other services, demographic data of years of experience, qualification and area of specialty; and open guided question of types of delay developmental milestone, list of services and facilities in managing the conditions, list of specialist in multidisciplinary approach, and their role in influencing and recommending management of the condition as well as parents and caregivers support programme was used to elicit the level of the knowledge of the nurses (who are supposed to have attained some level of general nursing training in Maternal and child Health Nursing, Medical Surgical Nursing and Mental Health Nursing).

The knowledge and application of Nurses on delay developmental milestone, holistic care of a child with the condition, their influence in the management, and family and caregivers support programme will establish early identification of the child’s needs, which will be reported accordingly to proffer early specialized development screening, diagnosis, and early intervention treatment plan. The earlier the diagnosis for Cerebral Palsy the better, and the earlier intervention and therapies are initiated the greater the chances of the child maximizing his future potentials; and the family chances of qualifying to get support measures from the government and non-governmental agencies.

Main content

Infants and children grow and develop in their own pace, but there is an average age to establish when specific milestone can be achieved. Developmental milestone is defined by the Center for parent information and Resources, as the time table for skills to emerge commonly. They are the points in time when a child learns to accomplish a specific task.

Developmental Milestones as stipulated by the United States of America Health System are specific behaviors and skills that show us how far a child has gone on the journey to human development. They further listed sitting, feeding oneself, crawling, walking and running are motor skills that are celebrated as human developmental milestone.

Developmental Delay on the other hand is generally defined as the failure of a child to reach developmental milestones at the expected age (First & Palfrey, 1994). Delayed Development, according to Individuals with Disabilities Education Act (IDEA), can be defined as a child with a disability( for children aged three through nine years), who is experiencing developmental delay as defined and as measured by appropriate diagnostic instruments and procedures in or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development; and who by reason thereof, needs special education and related services.

Types of Developmental Delay Are-Failure to thrive, pervasive development disorder (PDD), autism spectrum disorder (ASD), global developmental delay, Down syndrome, fetal alcoholic syndrome, fragile X syndrome, speech and language delay, Cerebral Palsy, Intellectual disability.

The American Academy of Pediatrics recommend monitoring of general child development using standardized developmental screening tool at 9 months, 18 months, 24 or 30 months. 18 and 24 months for autism, or whenever a parent or caregiver has concern. Milestone evaluation is conducted by a skilled and highly trained professional that uses the findings to create a profile for the child’s strengths and weaknesses in areas of -Physical development( fine motor skills and gross motor skills), - Cognitive development( intellectual abilities), - communication development( speech and language), - social or emotional development( social skills, emotional control), and -Adaptive development ( self-care
skills). The result which will determine if the child should commence medical treatment or go for early intervention services.

However, Collins, Pringle, Alexander et al 2017 contributed that implementing routine screening in primary health care, using cost effective and acceptable level of burden and provider training increases milestone screening and early identification and mitigation of developmental delays. In a previous educational intervention study carried out on child development surveillance with nurses who worked in Sanitary District III at Joao Pessoa Paraiba Brazil, by Altamira, Neusa et al (2015) 3 results revealed that after an educational intervention, there was increase in the knowledge of nurses, and implementation of child development surveillance; thereby improving the quality of child healthcare. This confirms what Dr. Trimm stated that Infants and children brain grow rapidly, should there be development challenge, early recognition and early intervention on those problems can improve the overall development.

In consonant with the United Nations Sustainable Development Goals and the UN Convention on the Rights of the Child (CRC) stating that health and education contribute to the well-being of all. Children with developmental delays, mental, behavioural, cognitive, and neurological disabilities need greater access to healthcare, early childhood care, development services and education.

Early intervention(0-3years) services are-Assistive technology (devices a child may need)-Auditory or hearing services, Speech and Language services, Counselling and training for families, Medical services, Nursing services, Nutrition services, occupational therapy, physical therapy, psychological services, occupational therapist, play therapist.

Special education services are for children of age 3-5 years or more. Some of such special educational services in Nigeria are; (1) Modupe Cole Memorial child care and Treatment home No 1 St. Finbarr College Road, Akoka; (2) Benola (a non-profit organization for persons living with Cerebral Palsy) Suite 19/20, Praise Plaza, Ajar/Ado road Lekki, Lagos. (3) C.A.D.E.T. Academy research and evidence based special needs education and learning programme. Block L2, No13 Uruguay street Abuja. (4) Patrick speech and language center. (5) Center for Autism and development. (6) Special School for Handicapped Children (UBE) Nursery Primary and Junior secondary school Port Harcourt.

Dr. Franklin Trimm, a professor of pediatrics at the University of South Alabama College of Medicine identified that the sequence for children to attain developmental milestone always take a sequence of order - roll over, sit, crawl, stand and walk. He further explained that different reasons are responsible for delayed development; however, some may require a detailed medical evaluation to determine the cause, which may be medical, genetic or neurological most which are uncommon. He advised that pediatricians and primary healthcare provider should be contacted first should there be any concern for delayed development; as they will be in the position to consider additional evaluation and make referrals where necessary.

In this case study, Cerebral Palsy, a medical condition was responsible for the inability of the child to attain the developmental milestone according to the specified time table. The most apparent early sign of Cerebral Palsy is developmental delay. Cerebral Palsy is a neurological syndrome, with signs and symptoms that varies with individuals. Its severity is dependent on the degree of injury to the brain (probably from pregnancy and delivery complications) sequel to impairment of muscle tone, motor function, balance control, coordination, reflexes and posture. Oral motor dysfunction is also a consequent with resultant difficulty in swallowing and feeding, speech impairment and poor facial muscle tone. Others are delay in key growth milestone: rolling over, sitting up, and crawling, standing, walking and balancing. As the brain and child develops, other signs may also erupt at 3-5 years.

Diploma certified and licensed nurses possess general knowledge in Maternal and child health, Medical and Surgical Nursing, and Mental Health Nursing which prepares them to practice as primary health providers especially in the child health clinics, (where they conduct growth monitoring, looking out for milestone and immunization schedules ; ) as well as other departments like pediatric, maternity, medical and surgical wards where parents and care givers will always reach out to them for help, counselling and referral, and the nurse is expected to act accordingly.
Besides using the kings Theory or Model of Holism in Nursing, which deals with growth and development and goal attainment, helps the nurse to determine and address the goals of the patients met and render nursing care accordingly. For the case study the developmental milestone was not attained as per the age of the child.

The bed rock of parties involved in the care of a child with Delayed Development is the parents/family or care givers. Children with delayed milestone will thrive well if they get the nurture and support from their care givers mostly at the early age. In the contrary most parents lack the knowledge of the child’s condition which hinges the overall outcome of care. To this end the need to educate the care givers on special care and provide support system in the form of specialists/therapist, special schools, health grants and so on will enhance their patience and consistence in meeting the child’s need.

Methodology

This is a descriptive survey carried out with self-structured questionnaire for a cross-section of nurses. The survey was in three segments, the first segment is expected to provide answers in the Likert scale of agree, strongly agree, disagree, strongly disagree, and neutral. The second is demographic questions to years of experience, sex, age, educational qualification, and area of specialty. While the third segment was guided open ended questions that allowed the respondents to express their knowledge in writing.

A telephone Interview was also conducted individually on different occasions with a Pediatrician, General Practitioner, counselor, Dietician/Nutritionist, Physiotherapist, and Health Maintenance officer (a medical doctor).

5In the facility the nurses are working to ascertain the provision of services for holistic care for children with Delayed Milestone.

Forty-Five (45) Nurses working with a labour supply contracting company, J & Amafel Limited in southern Nigeria are the target population. Questionnaire was distributed to 28 nurses, but only 24 (n=24) participated with duly checked informed consent. Permission was also obtained from respective authorities.

The survey was conducted within July and August 2019, and retrieved within one week of distribution due to the nature of work and shift schedule. Data was collated and arranged, analyzed manually and through micro soft Excel and presented in percentages, tables, and graphs; for easy comprehension and interpretation.

Results

Total of 24(54.5%) Nurses participated in the survey instead of 45; 20(45.5%) did not participate due to the nature of shift, annual leave, and multiple location. The respondents were 4 (16.7%) males, and 20 (83.3%) females. Their Age range: 2 were (51-59Years) category (8.3%), Nil in (46-50Years), 8(33.3%) in (41-45 years), 11(45.8%) in (31-40years),1(4.2%) in (20-30years), 2 (8.3%) participants did not reveal their age.

They are all Registered Nurses (100%).19 Registered Midwives (79.2%), 1 Occupational Nurse (4.2%), 1 Psychiatric Nurse (4.2%), 1 Paediatric Nurse (4.2%), 1 Public Health Nurse (4.2%), 4 BNSC (16.7%) and 1 MSC (4.2%).

The participants Years of experience obtained were -0-5years -2(1), 6-10 years -6 (%), 11-15years -4(1), 16-20years -6 (%), 21-25years -3(1), 26-30years-2 (%), (no response)-1.

The scalar Likert’s response ranging from Neutral, strongly disagree, Disagree, Agree and strongly agree for Questions 1-9 Revealed:

15 Nurses agreed they are conversant with Delayed developmental milestone; 5 strongly agreed, 2 disagreed, one is neutral, and one did not respond. Total of 20 nurses (83.3%) are conversant with the condition (16.7%) are not.

To elicit if participants have worked in Paediatric/Children ward, 14 agreed, 6 strongly agreed, 2 disagreed, while the remaining 2 are strongly disagree and neutral respectively. (83.3%) have worked in Paediatric ward.

10 Nurses agreed they have nursed a child with Delayed Developmental Milestone, 5 strongly agreed, 3 disagreed, 2 strongly disagreed while 4 nurses are neutral. (62.5%) have nursed a child with this condition, (37.5%) have not.

For Nurses who were able to identify the needs of the child with Delayed Developmental milestone on admission and discharge, 10 Nurses agreed they were able to, 6 strongly agreed, 4 disagreed, while 4 are neutral. (66.7%) have identified the needs, (33.3%) did not.

Concerning the care given to the child, 9 of the participants agreed they are satisfied, 5
strongly agreed, 5 disagreed, 1 strongly disagreed and 4 are neutral. (58.3%) are satisfied with the care, (41.7%) are not.

10 of the respondents indicated the child’s needs were met by agreeing, 3 strongly agreed, 5 disagreed, 1 strongly disagreed while 5 were neutral about the child’s need been met. (54.2%) indicated child’s needs were met, (45.8%) did not agree.

Family and care givers were engaged in coping skill and counselling. 12 of the participants agreed to this, 4 strongly agreed, 4 disagreed, 1 strongly disagreed and 3 are neutral. (66.7%) engaged family, (33.3%) did not engage the family.

Out of the 24 nurses, only 11 have nursed a child with cerebral palsy. 6 agreed, 5 strongly agreed, 6 disagreed, 4 strongly disagreed and 3 are neutral. (45.8%) nurses have nursed a child with cerebral palsy, (54.2%) have not.

The health care system/facility makes room for children with special needs. 4 respondents agreed, 4 strongly agreed, 7 disagreed, 5 strongly disagreed, and 4 are neutral. (33.3%) accepted the facility make available the needs of the child, (66.7%) did not accept.

The respondent’s years of experience, qualification in relation to answers to questions number 14-21 (subjective) obtained revealed:

No response to years of experience, level of education- (RN/RM-1)

0-5 years of experience, level of education- (RN-2). They both answered fairly.

6-10 years of experience, level of education- (MSC-1, BNSC-3, Paediatric -1, and Midwife-1). The BNSC, RN/RM, Paediatric Nurse and MSC answered well respectively.

11-15 years of experience, level of education- (RN/RM-1, BNSC-2, Psychiatric Nurse -1,). The Psychiatric nurse gave the most correct answers followed by the RN/RM, and BNSC.

16-20 years of experience, level of education- (RN/RM-3, Occupational Health Nurse-1, and BNSC-2). RN/RM, and Occupational Health gave the most correct answers.

21-25 years of experience, level of education-(RN/RM-2, Public Health Nurse -1). The PHN answered better.

26-30 years of experience, level of education-(RN/RM-2). One answered better.

For the third segment of the survey where nurses expressed their knowledge in writing from question 14-21,

When asked to list the conditions of Delayed Developmental Milestone (DDM), 3 (12.5%) did not.

For challenges faced when caring for DDM, 19 (79.2%) correctly highlighted, while 5 (20.8%) did not respond.

When asked about knowledge of services and facilities for the care of DDM, 13 (54.2%) are not aware.

Only 8 nurses (33.3%) list services for DDM.

For recommendation to the facility/place of work in the care of DDM, 11 nurses (45.8%) express their recommendation.

Apart from medical treatment, which another professional is to care for DDM? (45.8%) 11 nurses correctly listed.

17(70.8%) nurses in each of the clearly stated how they can influence the management of DDM; and also give support to family respectively.

Only 6 (25%) nurses wrote correctly in all the questions of this third segment survey and competed.

Result from the Interview with other healthcare professionals:

The General practitioner- feels the facility make room for children with special needs. While the Paediatrician said the facility do not have room for children with special needs apart from the medical needs, but rather suggest to parents where such needs are met, and the parents pay out –of their pocket. The counselor who also accompany nurses for hospital visitation/follow-up and plays a major role in this condition said she is not aware of such provision for children with special needs by the facility. The physical therapist, said he attended to 4 children diagnosed developmental delay, but no purpose built devises and equipment, and parents were also not committed to the regimen.

The Dietician/Nutritionist said she has not seen a child with delayed milestone, but has developed treatment plan for children with poor nutritional status; and the medical doctor in-charge of health maintenance organization for the facility also confirmed there are no provisions made available by the facility for children with delayed developmental milestone.

Discussion

First & Palfrey, 1994 defined. defined Developmental Delay as the failure of a child to reach developmental milestones at the expected
age. While Individuals with Disabilities Education Act (IDEA), defined it as a child experiencing developmental delay in one or more of the following areas- physical development, cognitive development, communication development, social or emotional development, or adaptive development; and who by reason thereof, needs special education and related services.

Only 25% of nurses correctly answered and listed the types of delayed development milestone in this segment of survey; Meaning 75% do not have knowledge of this condition. IDEA also stated the need of special education and related services, for children with delayed development. The study revealed 33.3% of nurse correctly listed related other services for the holistic care of the children with this condition. Considering the role of early intervention with such facilities, - Assistive technology (devices a child may need)-Auditory or hearing services, Speech and Language services, Counselling and training for families, Medical services, Nursing services, Nutrition services, occupational therapy, physical therapy, psychological services, occupational therapist, play therapist, delay in early detection, reporting and early referral of the child will significantly affect the prognosis.

The family plays an elaborate role in the holistic care of children with delayed milestone. Children thrive well if they get the nurture and support from their care givers mostly at the early age. In the contrary most parents lack the knowledge of the child’s condition which hinges the overall outcome of care. This is where the nurses play a major role to educate the care givers. When 54.2% of nurses are unaware of the facilities and services how would they counsel and introduce the family to embark on early intervention. Also, when faced with this condition, care givers may easily be discouraged, offering counselling and support will promote a nurturing environment. Although 66.7% of the nurses offered support, only 33.6% correctly listed other facilities that could also render assistance, more so when the admitting facility

Diploma certified, Bachelor of Nursing science (BSN), and other specialist area licensed nurses possess general knowledge in Maternal and child health, Medical and Surgical Nursing, and Mental Health Nursing which prepares them to practice as primary health providers.

All respondents are registered nurses and are expected to have knowledge of delayed developmental milestone as it is included in the curriculum theoretically and clinically.

Conclusion

Knowledge of Nurses on developmental delay and the holistic care is inadequate in spite of their educational qualification and years of experience as only 25% of the responded gave correct answer and completed the most important part of the survey, thus limiting their skill for early detection. The role of early identification and intervention is the key, hence the need for knowledge upgrade especially in the screening of children in child wellness clinic, as it has shown to yield results in previous research. When faced with this condition care givers may easily be discouraged, offering counselling and support will promote a nurturing environment. Although 66.7% of the nurses offered support, only 33.6% correctly listed other facilities that could also render assistance, more so when the admitting facility do not make provision. This project was on a very minute aspect of cross section of nurses in Southern Nigeria, taking a larger group is recommended more so for nurses working in Primary Health Care, Government hospitals, specialist and Teaching hospitals.
### Figures and tables

#### Table 1. Timeline for Childhood Developmental Milestone

<table>
<thead>
<tr>
<th>S/N</th>
<th>AGE</th>
<th>TASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 Months</td>
<td>Begins to smile at the sound of voice, and turns head towards sound.</td>
</tr>
<tr>
<td>2</td>
<td>3 Months</td>
<td>Raises head and chest while lying on stomach, grasp objects, and smile at other people.</td>
</tr>
<tr>
<td>3</td>
<td>4 Months</td>
<td>Smiles spontaneously at people, babbles, holds head steady and reaches for toy with one hand.</td>
</tr>
<tr>
<td>4</td>
<td>6 Months</td>
<td>Knows familiar faces, likes to look at self in the mirror, respond to sound with sound, rolls from back to stomach, and stomach to back, moves object from hand to hand.</td>
</tr>
<tr>
<td>5</td>
<td>7 Months</td>
<td>Responds to own name and find partially hidden objects.</td>
</tr>
<tr>
<td>6</td>
<td>9 Months</td>
<td>Beginning of strangers’ anxiety, understands “no”, sits without support, stands holding on and crawls.</td>
</tr>
<tr>
<td>7</td>
<td>12 Months</td>
<td>Walks with or without support, say words like “mama”, “dada”, and enjoys imitating people.</td>
</tr>
<tr>
<td>8</td>
<td>18 Months</td>
<td>Walks independently, drinks from a cup says at least 15 words.</td>
</tr>
<tr>
<td>9</td>
<td>2 Years</td>
<td>Runs, speaks in two words sentences, follows simple instruction, and begins make-belief play.</td>
</tr>
<tr>
<td>10</td>
<td>3 Years</td>
<td>Climbs well, speaks multi-word sentences, sorts objects by shape and colour and rides a tricycle.</td>
</tr>
<tr>
<td>11</td>
<td>4 Years</td>
<td>Gets along with people outside the family and sings from song, poems and memory, draws circles and square, hops and stands on one foot for two seconds.</td>
</tr>
<tr>
<td>12</td>
<td>5 Years</td>
<td>Gender identity, tells name and address, jumps, hops and skips, gets dresses, counts up to 10 or more objects, uses a fork and spoon, and copies a triangle.</td>
</tr>
</tbody>
</table>

#### Table 2. Nurses Response to Types of Delayed Development Milestone

<table>
<thead>
<tr>
<th>S/N</th>
<th>YRS.EXP</th>
<th>EDU.QLF</th>
<th>RESPTS. (24)</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>Mongol-1</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>Delay in talking-1, Down syndrome and cerebral palsy-1.</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>Learning disability-1, Growth retardation-1, Down syndrome, sickle cell anaemia, Autism-1, cerebral palsy-1, cleft palate, Aphemizers disease-1, Down syndrome-1.</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>Down syndrome-1, Delay in walking-1, Failure to thrive-1, no response-1.</td>
</tr>
<tr>
<td>5</td>
<td>16-20</td>
<td>RN, RM, OH, BNS.</td>
<td>6</td>
<td>Down syndrome-2, poor nutrition-1, intellectual disabilities, mongolism-1, no response-1, mental retardation,</td>
</tr>
<tr>
<td>S/N</td>
<td>YRS.EXP</td>
<td>EDU.QLF</td>
<td>RESPTS (24)</td>
<td>RESPONSE</td>
</tr>
<tr>
<td>-----</td>
<td>---------</td>
<td>---------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>You need patience-1</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>No response -1, Communicating with the child-1</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>Cooperating with care givers-1, I have not nursed a child with such condition-1, limited specialty nurses, specific care giving facility-1, communication and interaction-1, inadequate facilities in the hospital, lack of cooperation on part of the relatives-1, finance-1</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>I have not cared for any-1, activities of daily living-1, inability to meet up with developmental milestone-1, no response-1</td>
</tr>
<tr>
<td>5</td>
<td>16-20</td>
<td>RN, RM, OH, BNS.</td>
<td>6</td>
<td>No response-2, low class parents-1, it puts huge strain on the family structure, and coping challenges-1, communication-1, Lack of specialist and therapists, not meeting special needs of the child only the medical needs-1</td>
</tr>
<tr>
<td>6</td>
<td>21-25</td>
<td>RN, RM, PHN.</td>
<td>3</td>
<td>Communication-1, no response-1, I have not nursed one-1</td>
</tr>
<tr>
<td>7</td>
<td>26-30</td>
<td>RN, RM</td>
<td>2</td>
<td>No purposeful building or department for cerebral palsy-1, no response-1</td>
</tr>
</tbody>
</table>

**Table 3. Nurses Response in Major Challenges Faced During the Care of a Child with Delayed Development**

<table>
<thead>
<tr>
<th>S/N</th>
<th>YRS.EXP</th>
<th>EDU.QLF</th>
<th>RESPTS (24)</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>No response-1.</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>Yes-1, No-1</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>Yes-3, No-2, Yes, I am aware but they are inadequate-1.</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>No response-1, No-2, yes-1.</td>
</tr>
</tbody>
</table>

**Table 4. Nurses Knowledge of Services and Facilities for the Holistic Care of Delayed Development**
Table 5. Listing of Any Services and Facilities Apart from The Hospital That Can Care for This Child by Nurses

<table>
<thead>
<tr>
<th>S/N</th>
<th>YRS.EXP</th>
<th>EDU.QLF</th>
<th>RESPTS (24)</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>No response-1.</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>Nil-1, Orphanage home-1</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>Rehabilitation centers-2, None-2, No response-1, Intellectual disability homes and special needs schools-1.</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>No response-1, Special school and rehabilitation centers-1, family therapy, cognitive therapy, social therapy, intellectual therapy and others-1.</td>
</tr>
<tr>
<td>5</td>
<td>16-20</td>
<td>RN, RM, OH, BNS.</td>
<td>6</td>
<td>No-1, remand home-1, no response-1, exceptional teachers teaching exceptional children-1, good diet-1, special school for the handicap creek road Port Harcourt, Corpus Christy church for special children, daughters of charity/other catholic schools for special children-1.</td>
</tr>
<tr>
<td>6</td>
<td>21-25</td>
<td>RN, RM, PHN.</td>
<td>3</td>
<td>No-1, no response-1, Yes-“The Child” in Catholic cathedral Port Harcourt-1.</td>
</tr>
<tr>
<td>7</td>
<td>26-30</td>
<td>RN, RM</td>
<td>2</td>
<td>No response -1, Nil-1.</td>
</tr>
</tbody>
</table>

Table 6. Nurses Recommendation to the Facility where the Child was Treated?

<table>
<thead>
<tr>
<th>S/N</th>
<th>YRS.EXP</th>
<th>EDU.QLF</th>
<th>RESPTS (24)</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>No response-1.</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>send the child to pre care school-1, No response-1</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>Special need Paediatric unit and to train nurses-1, no response-2, free medical care-1, language development and communication-1, collaborate with health care providers-1.</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>Patience is needed during care- 1; They should be more careful and go for specialists-1, none-1, no response-1.</td>
</tr>
<tr>
<td>5</td>
<td>16-20</td>
<td>RN, RM, OH, BNS.</td>
<td>6</td>
<td>Creating public awareness-1, no response-2, To link up with other groups in the care of disable children-1, improved diet-1, To advocate and employ services of specialized</td>
</tr>
</tbody>
</table>
therapist in speech, vocation, physiotherapist and psychotherapist-

1.

<table>
<thead>
<tr>
<th>S/N</th>
<th>YRS.EXP</th>
<th>EDU.QLF</th>
<th>RESPTS</th>
<th>RESPONSE</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>No response-1.</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>Nil- 1, counselor, psychiatrist or behavioral scientist-1.</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>Psychotherapist, speech therapist, counselor, intellectual disability nurse-1, social worker, nutritionist-1, child psychologist-1, no response-1, speech therapy, occupational therapy-1, Rehabilitation team-1.</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>No response-1, counselor, psychiatric nurse, social worker, doctors-1, To sanction defaulters and encourage nurses and doctors to go for specialty courses-1, Rehabilitation and counselling team-1.</td>
</tr>
<tr>
<td>5</td>
<td>16-20</td>
<td>RN, RM, OH, BNS.</td>
<td>6</td>
<td>No response-2, psychotherapy group-1, counselor-1, counselors. Behavioral scientist-1, physiotherapist, psychotherapist, social worker, paediatrician, speech therapist, vocational therapist-1</td>
</tr>
<tr>
<td>6</td>
<td>21-25</td>
<td>RN, RM, PHN.</td>
<td>3</td>
<td>No response-3.</td>
</tr>
</tbody>
</table>

Table 7. Nurses’ Knowledge of other Disciplines to be Part of the Team for Holistic Management of the Child
### Table 8. How can Nurses Influence the Decision of the Management of Such Clients?

<table>
<thead>
<tr>
<th>S/N</th>
<th>YRS.EXP</th>
<th>EDU.QLF</th>
<th>RESPTS (24)</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>No response-1.</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>Be an advocate for the client-2.</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>Being an advocate-2, meet their medical needs-1, influence management to have special need pediatric unit-1, no response-1, nurses should advice doctors to refer patients to facilities that specialize in their care-1.</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>be patients advocate-2, no response-1, nurses should update themselves-1</td>
</tr>
<tr>
<td>5</td>
<td>16-20</td>
<td>RN, RM, OH, BNS.</td>
<td>6</td>
<td>Health education-1, Through their care for the patients and experience-1, no response-2, health education and home visiting-1, Through early detection at birth, child health clinic, admission and reporting same, involving family members, recommend special therapist treatment-1</td>
</tr>
<tr>
<td>6</td>
<td>21-25</td>
<td>RN, RM, PHN.</td>
<td>3</td>
<td>Home visiting, education-1, no response-2</td>
</tr>
<tr>
<td>7</td>
<td>26-30</td>
<td>RN, RM</td>
<td>2</td>
<td>Through reporting, research and team work-1, no response-1</td>
</tr>
</tbody>
</table>

### Table 9. Ways Nurses can Alleviate the burden from family care givers?

<table>
<thead>
<tr>
<th>S/N</th>
<th>YRS.EXP</th>
<th>EDU.QLF</th>
<th>RESPTS</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No response</td>
<td>RN/RM</td>
<td>1</td>
<td>No response-1.</td>
</tr>
<tr>
<td>2</td>
<td>0-5</td>
<td>RN</td>
<td>2</td>
<td>Educate the family about the condition-1, involve the family members in decision making-1</td>
</tr>
<tr>
<td>3</td>
<td>6-10</td>
<td>RM, PDN, BSN, MSC</td>
<td>6</td>
<td>No response-1, provision of external braces, health educate the care givers-1, Being positive and friendly, teaching coping skills, diligently carryout their professional duties and do appropriate follow-up-1, no response-1, by carrying out holistic care of the patients and involving the family in decision making-1, Explaining the condition to parents, advising parents on nutrition, referring parents to facilities specialized in the condition-1.</td>
</tr>
<tr>
<td>4</td>
<td>11-15</td>
<td>RN, RM, BNS.</td>
<td>4</td>
<td>Nursing care should be performed holistically-1, no response-1, involve the family, psychotherapy</td>
</tr>
</tbody>
</table>
and education-1, Assist the family, educate them on the condition, treatment and prevention-1

| 5 | 16-20 | RN, RM, OH, BNS. | 6 | Health education-2, Reporting to the government for assistance-1, no response-1, Pulling resources and forming care group for the mentally disable children-1, Counselling, referral, encouraging acceptance of children, willing to serve and specialize in such areas, follow-up-1 |
| 6 | 21-25 | RN, RM, PHN. | 3 | Send children to where they can be treated-1, liaising with NGOs, government and other bodies to support the parents in the care of patient-1, no response-1. |
| 7 | 26-30 | RN, RM | 2 | Good holistic care patient management, home visit, follow-up, liaise with the family and NGOs, government, and the hospital-1, no response-1 |

**Figure 1.** (Educational Qualifications of Participants)
Figure 2. (Knowledge of services for Multidisciplinary Approach for Delayed Developmental Milestone (DDM))

Figure 3. (Respondents Years of work Experience)

Acknowledgement

My heart felt gratitude goes to the Management and nursing staff of J & Amafel Limited for their permission and participation in the survey of this project in spite of their busy work schedule. The support of my supervisor in ensuring conclusion and compilation of the survey is highly appreciated.

I also appreciate the Faculty and student mentors of TAU for their patience in the conclusion of this “Capstone Project”.

The support and encouragement from my family in completion of this work cannot be overemphasized. I will remain indebted to them.

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Health Disparities among Lesbian, Gay, Bisexual, and Transgender Population in Ghana

Article by Nathaniel Acolatse

Ghana Health Service, Ga West Municipal Health Directorate, Amasaman, Accra, Ghana
E-mail: yaonat@hotmail.com

Abstract

Lesbian, gay, bisexual and transgender population experience myriads of health disparities. The purpose of this study was to examine the health disparities among the LGBT population in Ghana, as no study has been specifically conducted in Ghana to examine such area of study. The study specifically sought to determine the mental, physical and the behavioral health disparities among the LGBTs in Ghana. A total of 494 self-identified LGBTs, recruited via non-probability sampling technique of snowball participated in the study. The survey included four categories of survey items: demographic information, mental health behavioral health, and the physical health conditions of the LGBTs. The findings of the study indicated that the LGBT population in Ghana experience a number of health disparities, ranging from behavioral, physical and mental health. The results from the one-way analysis of variance revealed that lesbian and gay population in Ghana experience mental, behavioral, and physical health conditions more than their bisexuals and transgender. It was found that lesbians and gay engage in excessive use of tobacco, over-use of alcohol, use of drugs, and engage in unprotected sex behaviours more than their bisexual and transgender counterparts (p<.05). The findings of the study also revealed that the lesbians and gays in Ghana have higher risks of cancer, being overweight or obese, and the risk of being diagnosed with stroke (p<.05). Based on the findings of the study, it is recommended that the mental behavioral and the physical health of the LGBTs in Ghana should be given the needed attention.

Keywords: Health disparities; sexual orientation; lesbian; gay; stigmatization; Ghana

Introduction

Health disparities are differences in health between different groups of people. Lesbian, gay, bisexual and transgender (LGBT) people are found to experience a number of health disparities. LGBT people are at higher risk of certain conditions, have less access to health care, and have worse health outcomes. These disparities are seen in the areas of behavioral health, physical health, and access to care (Grant et. al, 2011). Behavioral health includes mental health, substance abuse, and addiction. LGBT people are at greater risk of suicide and suicidal thoughts, mood disorders and anxiety, eating disorders, alcohol, tobacco, and substance abuse (Grant et. al, 2011). In terms of physical health, LGBT people are at greater risk for certain conditions, diseases, and infections. LGBT people are more likely to rate their health as poor and report more chronic conditions (Lick, Durso, & Johnson, 2013). Lesbian and bisexual women have higher rates of breast cancer, and transgender men and women are at greater risk (Dibble, Roberts and Nussey, 2004). LGBT people have higher rates of HPV infection (National LGBT Cancer Network, 2013). Lesbian and bisexual women may have a higher risk of cervical cancer, and gay and bisexual men may have a higher risk of anal cancer (National LGBT Cancer Network, 2013). LGBT people are more likely to be obese (Centers for Disease Control and Prevention, 2013). Gay and bisexual men are more likely to have HIV/AIDS (Centers for Disease Control and Prevention, 2013). Access to care refers to the fact that LGBT people have less access to the health care they need. They are less likely to have health insurance, less likely to fill prescriptions, more likely to use the emergency room or delay getting care, and more likely to be refused health care services and be harassed by health care providers (Grant et. al, 2011).

One of the major reasons that has been attributed to LGBT’s health care disparities has to
do with the social stigma and the discrimination and abuses lesbian, gay, bisexual, or transgender continue to experience on daily basis (Krehely, 2009). Because of this stigma, LGBT people face frequent harassment and discrimination, leading to negative mental health outcomes and high rates of risk-taking that increase the likelihood of physical harm (Krehely, 2009). Meanwhile, laws criminalizing LGBTs' sexual activities and even being an LGBT, itself has been the main factor of the discrimination and abuses of LGBTs leading to their experiencing of these disparities in health care systems (Amnesty International, 2001). Laws criminalizing LGBT unfortunately exist on all continents, albeit in different forms (Human Right Watch, 2008).

LGBT individuals, like their heterosexual individuals, have a right to healthcare. However, discrimination and abuses faced by the LGBTs have restricted their access to healthcare. For instance, in the United States of America, in 2010, more than half of LGBT people reported being discriminated against by a health care provider and more than 25 percent of transgender individuals reported being refused medical care outright. Health care services tailored to the LGBT community are absent in Africa. As a result of the discrimination and abuses faced by LGBT individuals, they face the higher risk of depression, anxiety, obsessive-compulsive and phobic disorders, suicidality, self-harm, and substance use among LGBT people (Diamant and Wold, 2003; Cochran and Mays, 2007; Boyd et al., 2010). There is a growing body of research that supports the theory that negative experiences resulting from LGBT stigma can lead to chronic stress that contributes to emotional distress among LGBT persons, which could lead to mental health problems (Bontempo and D’Augelli 2002; Clements-Nolle et al. 2006; Murdock and Bolch 2005).

Ghana has a bad record when it comes to the treatment of lesbian, gay, bisexual and transgender (LGBT) people. LGBT people are very frequently victims of physical violence and psychological abuse, extortion and discrimination in many different aspects of daily life (Human Right Watch, 2018; Quaye et al., 2015; Green et al., 2015). Many LGBT Ghanaians fear disclosing their sexual identity because of the stigma associated with homosexuality — the fear of violence perpetrated by family members and others in the community and homelessness (Human Right Watch, 2018; Quaye et al., 2015; Green et al., 2015). LGBT individuals in Ghana dare not disclose their sexuality in public (Frimpong, 2018; MacDarling, 2011; Ofori, 2014; Haruna, 2015; Essien and Aderinto, 2009; Dankwa, 2009; Allotey, 2015; Human Right Watch, 2018). The legal landscape and social climate for LGBT people in Ghana have contributed to a large extent the discrimination and the abuses faced by the LGBTs in Ghana (Human Right Watch, 2018). As a result of these discrimination and abuses, most of the LGBTs in Ghana have been found not to seek medical care at health facilities when they are sick, for fear that their identities will be disclosed to the general public (Human Right Watch, 2018). These marginalization and discrimination experienced by the LGBT people have contributed to barriers to the access of health and support services (Leonard, 2002; McNair, Anderson, Mitchell, 2003). These barriers are compounded by health care providers often lacking the appropriate knowledge and skills around LGBT health (Leonard, 2002). The experience of each individual member of the LGBT community varies widely depending on numerous potentially intersectional factors, including ability, age, sex, ethno-racial group, nationality, religion, socioeconomic status, geographical location, and other factors. However, what is common to the LGBTs is that experiences of individual and systemic oppression can often threaten their health and well-being.

Although a growing body of research has documented health disparities among LGBT people (Diamant & Wold, 2003; Dilley, Simmons, Boysun, Pizacani, & Stark, 2010, Chae & Ayala, 2010; Cochran, Mays, & Sullivan, 2003; Conron, Mimiaga, & Landers, 2010; Riggle, Rostosky, & Horne, 2010; Wallace, Cochran, Durazo, & Ford, 2011; Conron et al., 2010, Cochran, 2001; Rosenzweig et al., 2011; Shin &Lukens, 2002; Fredriksen-Goldsen, Kim, & Barkan, 2012; Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013; Herbst et al., 2008; Schuldten et al., 2008; Boehmer, Bowen, & Bauer, 2007; Case et al., 2004), findings from these studies are mixed. There is no absolute conclusion on the health disparities of LGBT population (Fredriksen-Goldsen, et al., 2014). On the other hand, many of these studies on health disparities among LGBT individuals have been conducted outside Ghana, creating a gap in literature on
health disparities among LGBT population in Ghana. To better address the needs of an increasingly diverse LGBT population in Ghana and to develop responsive interventions and public health policies, health disparities research is needed for this at-risk group. Examining to what extent sexual orientation is related to health disparities among LGBT population in Ghana is a first step toward developing a more comprehensive understanding of their health care needs. Hence, the purpose of this study is to examine the health disparities among the LGBT population in Ghana. Specifically, the study seeks to determine the mental health disparities among the LGBTs in Ghana, the physical and the behavioral health disparities among the LGBTs in Ghana.

**Materials and Methods**

**Description of the site**

Ghana is one of the countries on the African continent, found on the western part of the continent. Ghana sits on the Atlantic Ocean and shares borders with Togo, Cote d'Ivoire, and Burkina Faso. Formed from the merger of the British colony of the Gold Coast and the Togoland trust territory, Ghana in 1957 became the first sub-Saharan country in colonial Africa to gain its independence. Ghana's population of approximately 30 million (Worldometers, 2019) spans a variety of ethnic, linguistic and religious groups (Ghana Statistical Service [GSS], 2018). According to the 2010 census, 71.2% of the population are Christians, 17.6% are Muslim, and 5.2% practice traditional faiths (GSS, 2013). Over the past twenty years, Ghana has made major strides as far democracy under a multi-party system is concerned, with its independent judiciary winning public trust. Ghana is ranked among the top three countries in Africa for freedom of speech and press freedom, with strong broadcast media (World Bank, 2019). However, LGBT rights in Ghana are heavily suppressed. Physical and violent homophobic attacks against LGBT people are common, often encouraged by the media and religious and political leaders. Despite the Constitution guaranteeing a right to freedom of speech, of expression and of assembly to Ghanaian citizens, these fundamental rights are actively denied to LGBT people. Same-sex relationships are a misdemeanor punishable by up to three years in prison in Ghana. According to a recent Pew survey, 98 percent of Ghanaians feel that homosexuality is “morally unacceptable,” the highest percentage of any country surveyed (Pew Research, 2013). Anti-LGBT rhetoric is rampant from prominent Ghanaian politicians and LGBT citizens face societal discrimination and the threat of violent attack.

**Instruments**

The study was carried out through the use of a questionnaire. The questionnaire consisted of three sections. The first section focused on the demographics of the participants - age, ethnicity, sexual orientation, region, geographical location, working status, educational level, ethnicity, religious affiliation, and educational attainment. The second section of the questionnaire elicited information on the physical and behavioral health of the LGBTs. The response format was based on a five-point Likert scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly Agree. The third section of the questionnaire measured the mental health conditions of the LGBTs. The mental health conditions of the LGBTs were measured using the Brief Symptom Inventory 18 (BSI-18) Scale. The BSI is the short version of the SCL-R-90 (Derogatis, 1993), for the assessment of psychological distress, especially in clinical practice. The Brief Symptom Inventory with 53 items was developed by Derogatis using a factor analysis and maintaining the scale structure with the reduced item number of the SCL-90-R. The BSI-18, which is the short version of BSI-53 contains only three six-item scales somatization (SOMA), anxiety (ANX), depression (DEPR), and the global Scale Global Severity Index (GSI). Responses range from 0 (not at all) to 3(nearly every day). Contrary to the SCL-90-R and the BSI-53, the BSI-18 scores are calculated by sum scores. The GSI therefore ranges between 0 – 72 and the three scales between 0 – 24. The application studies demonstrated that the BSI-18 is a suitable instrument for measuring psychological distress and comorbidities in patients with different mental and somatic illnesses (Adams, Boscarrino, & Galea, 2006; Berman, Weems, & Stickle, 2006; Carlson, et al, 2004; Coley & Hernandez, 2006; Coultas D., Frederick, Barnett, Singh, Wludyka, 2005).

**Procedure**

The participants of the study were recruited from the LGBT community all over Ghana. Non-probability sampling of Snowball sampling
technique was used to select the sample for the study. The snowball sampling technique was appropriate for the study due to the fact that the LGBT individuals are a hidden population in Ghana which makes it difficult to access them. However, because they know themselves, the individuals are closely connected. As a result, one participant is likely to know others who are LGBT that make them eligible for inclusion in the study. The only disadvantage of this sampling technique is that as the participants are not selected from a sampling frame, the sample is subject to bias. For example, an LGBT individual who have many friends who are also LGBT were more likely to be recruited into the sample than those who do not have many friends who are LGBT. The study used a sample of 500 LGBT individuals all over the country. A total of 500 questionnaires were therefore sent out to the participants of the study. Of the total of 500 questionnaires sent to the LGBT individuals, 494 were retrieved and were considered usable for the study. In all, a response rate of 98.8% was achieved for the study. According to Fincham (2008), response rates approximating 60% for most research should be the goal of researchers, and for survey research intended to represent all LGBT individuals in Ghana, a response rate of at least 90% is expected. This was however achieved in this study.

**Statistical methods used.**

Statistical analysis was performed using IBM SPSS Statistics version 20.0 (IBM, Armonk, NY) with a significance level of 0.05. General descriptive statistics characteristics of the participants were expressed as the mean ± standard deviation for continuous variables and as frequency (%) for categorical variables. Internal consistency reliability was analyzed by using Cronbach’s alpha coefficient. Descriptive statistics – frequencies, percentages, mean and standard deviations were used to describe the participants’ demographics, mental health as well as the physical and behavioral health conditions of the LGBTs. The inferential statistics of one-way Analysis of Variance (one-way ANOVA) was used to explore the health disparities among the LGBTs in Ghana.

Cronbach’s alpha coefficient of 0.803 was obtained for the physical health conditions of the LGBTs, 0.81 was obtained for the behavioral health conditions of the LGBTs, and 0.894 was obtained for the mental health conditions (Somatization – 0.804; Depression – 0.862; Anxiety – 0.799) of the LGBTs. In general, Cronbach’s alpha coefficients of at least 0.6 are thought to be indicative of good reliability (Lee, Yim and Kim, 2018). Hence, the questionnaire for the study was confirmed to exhibit internal consistency for all the items under consideration in this paper.

**Results**

Table 1 presents the demographics of the participants of the study. Of the total 494 participants whose questionnaires were considered usable for the study, 73.5 % (n=363) were males, while 26.5 % (n=131) were females. On the other hand, of the total 494 participants, 14.1% (n=70) identified themselves as lesbians; 41.9% (n=208) identified themselves as gays; 43.5% (n=216) identified themselves as bisexuals; and .4% (n=2) identified themselves as transgender. The participants were from the 14 years and above, with 4.6% (n=23) between the ages of 14-19 years; 17.9% (n=89) between the ages of 20-24 years; 39.0% (n=194) between the ages of 25-29 years; 22.7% (n=113) between the ages of 30-34 years; and 15.7% were 35 years and above. Of the regional distribution of the participants, majority (19.8%) were from the Greater Accra Region; 14.3% (n=71) were from the Volta Region; 12.7% (n=63) were from the Ashanti Region; 12.1% were from the Central Region; and 11.9% were from the Eastern Region. Less than 10.0% were from the Northern (8.1%), Upper East (2.6%), Upper West (3.0%), and Western (7.3%) Regions. Regarding geographical location, majority of the participants (89.7%) were located in the urban areas, while 10.3% were found in the rural areas. About 49% of the participants declared themselves as working full-time, 17.6% reported as working part-time, while 19.5% of the participants declared themselves as unemployed. However, 2.4% of the declared themselves as retired workers, house-wife/house-husband, and self-employed, respectively, while 6.7% (n=33) reported as being students/pupils. Nearly 29% of the participants had completed senior high school, 31.9% had Technical/Vocational Training/Diploma, 15.9% had university undergraduate degree, and 5.5% had university post-graduate degree.
Table 1. Demographic profiles of the participants

<table>
<thead>
<tr>
<th>Demographics</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>363</td>
<td>73.5%</td>
</tr>
<tr>
<td>Female</td>
<td>131</td>
<td>26.5%</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesbian</td>
<td>70</td>
<td>14.1%</td>
</tr>
<tr>
<td>Gay</td>
<td>208</td>
<td>41.9%</td>
</tr>
<tr>
<td>Bisexual</td>
<td>216</td>
<td>43.5%</td>
</tr>
<tr>
<td>Transgender</td>
<td>2</td>
<td>.4%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-19</td>
<td>23</td>
<td>4.6%</td>
</tr>
<tr>
<td>20-24</td>
<td>89</td>
<td>17.9%</td>
</tr>
<tr>
<td>25-29</td>
<td>194</td>
<td>39.0%</td>
</tr>
<tr>
<td>30-34</td>
<td>113</td>
<td>22.7%</td>
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<td>35-39</td>
<td>35</td>
<td>7.0%</td>
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<tr>
<td>40-44</td>
<td>17</td>
<td>3.4%</td>
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<tr>
<td>45-49</td>
<td>12</td>
<td>2.4%</td>
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<tr>
<td>50 and above</td>
<td>14</td>
<td>2.8%</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashanti</td>
<td>63</td>
<td>12.7%</td>
</tr>
<tr>
<td>BA</td>
<td>41</td>
<td>8.3%</td>
</tr>
<tr>
<td>Central</td>
<td>60</td>
<td>12.1%</td>
</tr>
<tr>
<td>Eastern</td>
<td>59</td>
<td>11.9%</td>
</tr>
<tr>
<td>Greater Accra</td>
<td>98</td>
<td>19.8%</td>
</tr>
<tr>
<td>Northern</td>
<td>40</td>
<td>8.1%</td>
</tr>
<tr>
<td>Upper East</td>
<td>13</td>
<td>2.6%</td>
</tr>
<tr>
<td>Upper West</td>
<td>15</td>
<td>3.0%</td>
</tr>
<tr>
<td>Volta</td>
<td>71</td>
<td>14.3%</td>
</tr>
<tr>
<td>Western</td>
<td>36</td>
<td>7.3%</td>
</tr>
<tr>
<td>Geographical Location</td>
<td></td>
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</tr>
<tr>
<td>Urban</td>
<td>399</td>
<td>89.7%</td>
</tr>
<tr>
<td>Rural</td>
<td>46</td>
<td>10.3%</td>
</tr>
<tr>
<td>Working status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working full-time</td>
<td>241</td>
<td>48.9%</td>
</tr>
<tr>
<td>Working part-time</td>
<td>87</td>
<td>17.6%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>96</td>
<td>19.5%</td>
</tr>
<tr>
<td>Retired</td>
<td>12</td>
<td>2.4%</td>
</tr>
<tr>
<td>House-wife/husband</td>
<td>12</td>
<td>2.4%</td>
</tr>
<tr>
<td>Student/Pupil</td>
<td>33</td>
<td>6.7%</td>
</tr>
<tr>
<td>Self Employed</td>
<td>12</td>
<td>2.4%</td>
</tr>
</tbody>
</table>
Meanwhile, 9.3% (n=46) had primary education, 1.6% (n=8) had middle school living certificate education, while 2.6% (n=13) had no formal education. With respect to ethnicity, 46.8 % (n= 232) considered themselves to be Akans, 20.8% (n=103) considered themselves to be Ga/Dangme, while 14.5% considered themselves to be Ewes. However, 2.4% (n=12) regarded themselves as Guans, 6.0 % (n=30) regarded themselves as Mole-Dagbani, 2.6 % (n=13) regarded themselves as Grusi, 2.8% (n=14) regarded themselves as Gruma, and 3.4% (n=17) regarded themselves as Fantes.

**Mental health disparities among LGBTs in Ghana**

Table 2 shows the mean, standard deviation and the p-values of one–way ANOVA of the mental health disparities among the LGBTs in Ghana. As clearly noticed in the table the results from the one-way ANOVA shows that the bisexuals (M=1.3, SD=.79) and gays (M=1.0, SD=.70) were found to experience somatization several days than the lesbians (M=.90, SD=.60) and transgender group (M=.70, SD=.99). On the other hand, the bisexuals (M=1.2, SD=.72) and gays (M=1.0, SD=.75) on several days got depressed than the lesbians (M=.80, SD=.68) and transgender (M=.60, SD=.31). Meanwhile, the bisexuals (M = 1.3, SD = .89), gays (M = 1.1, SD = .89) and the lesbians (M = 1.2, SD = .70) were found to experience more anxiety than their transgender counterpart. The Global Severity Index (GSI) also indicated that the bisexuals (M = 1.3, SD = .72), gays (M = 1.0, SD = .67) and the lesbians (M = 1.0, SD = .50) for several days experienced mental disorders than their transgender counterparts.

**Behavioral health disparities among LGBTs in Ghana**

Table 3 shows the mean, standard deviation and the p-values of one–way ANOVA of the behavioral health disparities among the LGBTs in Ghana. As clearly indicated in the table, lesbians (M=2.3, SD=1.15) and gays (M=1.8, SD=1.15) were found to engage in excessive use of tobacco or cigarette more than the bisexuals (M=1.58, SD=1.14) and the transgender (M=1.5, SD=.70). In terms of over-use of alcohol most of the time, lesbians (M=2.3, SD=1.13) and gays (M=1.8, SD=1.18) were found to over-use alcohol most of the time more than the bisexuals (M=1.56, SD=1.05). The lesbians and the gays were also found to use drugs, such as cocaine, heroin most of the time than their bisexual and transgender
counterpart, as indicated in Table 3. Although, overall, the LGBTs were found not to highly engage in unprotected sexual behaviours (M=2.8, SD=1.3), the findings of the study as indicated in Table 3 reveals that lesbians (M=3.4, SD=1.41) are more likely to engage in unprotected sex behaviours than gays (M=2.8, SD=.103), bisexuals (M=2.54, SD=1.14), and transgender (M=2.0, SD=1.41).

Physical health disparities among LGBTs in Ghana

Table 4 shows the mean, standard deviation and the p-values of one−way ANOVA of the behavioral health disparities among the LGBTs in Ghana. As indicated in the Table 4, although majority of the LGBTs revealed that they had not been diagnosed with cancer (M=1.6, SD=1.0) contrary to research evidence that LGBTs have higher rates of cancer (Austin et al, 2013), the findings of the study revealed that the lesbians (M=1.7, SD=0.93), and the gays (M=1.6, SD=0.94) have higher risks of cancer than their bisexual (M=1.47, SD=1.01) counterpart. The LGBTs were also found to be less overweight or obese (M=1.6, SD=1.0) although research evidence has found that lesbian and bisexual women have higher rates of smoking, obesity, and nulliparity (Blosnich et al., 2014). However, the findings of the study revealed that the lesbians (M=2.3, SD=1.05) were prone to being overweight or obese more than the gays (M=1.8, SD=.103), bisexuals (M=1.54, SD=1.05), and the transgender (M=1.5, SD=.71). The findings of the study as indicated in Table 4 revealed that, although not overall significant, the bisexuals (M=2.47, SD=1.08), were found to be prone to be diagnosed with HIV/AIDs more than the lesbians (M=2.4, SD=1.18), and the gays (M=2.4, SD=1.14). Meanwhile, the lesbians (M=2.1, SD=1.03) were found to be prone to the risk of stroke more than their gay (M=1.9, SD=1.10), and bisexual (M=1.50, SD=1.0) counter parts.

Discussion

This study was to determine the mental, physical and the behavioral health disparities among the LGBTs in Ghana. The findings reveal significant health disparities among LGBT populations in Ghana, with both strengths and gaps across the continuum of health indicators examined. The results show of the study reveals that bisexuals and gays are found to experience somatization several days than the lesbians and transgender group. On the other hand, the bisexuals and gays on several days got depressed than the lesbians and transgender. Meanwhile, the bisexuals, gays and the lesbians were found to experience more anxiety than their transgender counterpart. These findings supports previous research findings on mental health of LGBT population, which reveals that people engaging in same−gender sexual behaviour and/or identifying as LGBT are at higher risk for mental health disorders, including depression, anxiety, substance abuse, and suicide ideation and attempts (Cochran, 2001, 2003, 2007; Gilman et al., 2001; Sandfort, de Graaf, Bijl, & Schnabel, 2001; Balsam, et al., 2005; Cochran and Mays, 2000; D’Augelli, 2002; Espelage, Aragon, Birkett, & Koenig, 2008). Such mental health disparities are likely to have detrimental consequences for the quality of life of these LGBT population in the later years (Wallace, Cochran, Durazo, Ford, 2011; Fried, and Guralnik, 1997; Fredriksen-Goldsen et al, 2011).
The results of the study show that there are behavioral health disparities among the LGBT population in Ghana. Lesbians and gay are found to engage in excessive use of tobacco, over-use of alcohol most of the time, use of drugs, such as cocaine or heroin, and also engage in unprotected sex behaviours more than their bisexual and transgender counterparts. These behaviours of the LGBTs may be linked to the discriminations and abuses faced by the LGBTs (Fredriksen-Goldsen et al, 2012; D’Augelli, Grossman, 2001; Fredriksen-Goldsen, Kim, Muraco, Mincer, 2009). This result of the study is in support of literature. It is found that gay, and bisexual are at increased risk of sexually transmitted infections (STI) such as syphilis, gonorrhea, chlamydia, human papillomavirus, and hepatitis A and B, other than HIV as a result of unprotected sexual behaviours (Rosenzweig et al., 2011). Lesbian and bisexual women are also found to be more likely to be obese and to use tobacco and alcohol than heterosexual women (Osuna et al., 2011); and gay, and lesbian have higher rates of tobacco and alcohol use, unhealthy weight control, and risky sexual behaviors than their straight peers (Shin & Lukens, 2002). LGBT people are at greater risk of suicide and suicidal thoughts mood disorders and anxiety, eating disorders, alcohol, tobacco, and substance abuse (Grant et. al, 2011).

Table 2. Mean, standard deviation and the p-values of one-way ANOVA of the mental health disparities of LGBTs

<table>
<thead>
<tr>
<th>Mental health conditions</th>
<th>Sexual Orientation</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lesbian</td>
<td>Gay</td>
<td>Bisexual</td>
<td>Transgender</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Somatization</td>
<td>.90</td>
<td>0.60</td>
<td>1.0</td>
<td>0.70</td>
<td>1.3</td>
<td>.79</td>
<td>0.7</td>
<td>0.99</td>
<td>1.1</td>
</tr>
<tr>
<td>Depression</td>
<td>.80</td>
<td>0.68</td>
<td>1.0</td>
<td>0.75</td>
<td>1.2</td>
<td>.72</td>
<td>0.6</td>
<td>0.85</td>
<td>1.0</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.2</td>
<td>0.70</td>
<td>1.1</td>
<td>0.83</td>
<td>1.3</td>
<td>.89</td>
<td>0.6</td>
<td>0.31</td>
<td>1.2</td>
</tr>
<tr>
<td>GSI</td>
<td>1.0</td>
<td>0.50</td>
<td>1.0</td>
<td>0.67</td>
<td>1.3</td>
<td>.72</td>
<td>0.6</td>
<td>0.51</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Table 3. Mean, standard deviation and the p-values of one-way ANOVA of the behavioral health disparities among the LGBTs

<table>
<thead>
<tr>
<th>Behavioural health disparities</th>
<th>Sexual Orientation</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lesbian</td>
<td>Gay</td>
<td>Bisexual</td>
<td>Transgender</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Excessive use of cigarette or tobacco</td>
<td>2.3</td>
<td>1.15</td>
<td>1.8</td>
<td>1.15</td>
<td>1.58</td>
<td>1.14</td>
<td>1.5</td>
<td>.71</td>
<td>1.8</td>
</tr>
<tr>
<td>Over-use of alcohol most of the time</td>
<td>2.3</td>
<td>1.13</td>
<td>1.8</td>
<td>1.18</td>
<td>1.56</td>
<td>1.05</td>
<td>1.0</td>
<td>-</td>
<td>1.8</td>
</tr>
<tr>
<td>Use of drugs (such as cocaine, heroin)</td>
<td>1.9</td>
<td>1.00</td>
<td>1.7</td>
<td>1.02</td>
<td>1.44</td>
<td>0.96</td>
<td>1.5</td>
<td>.71</td>
<td>1.6</td>
</tr>
<tr>
<td>Engage in unprotected sexual behaviours</td>
<td>3.4</td>
<td>1.41</td>
<td>2.8</td>
<td>1.32</td>
<td>2.54</td>
<td>1.14</td>
<td>2.0</td>
<td>1.41</td>
<td>2.8</td>
</tr>
</tbody>
</table>
Table 4. Mean, standard deviation and the p-values of one–way ANOVA of the physical health disparities among the LGBTs

<table>
<thead>
<tr>
<th>Physical health disparities</th>
<th>Sexual Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lesbian</td>
</tr>
<tr>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Risk of cancer</td>
<td>1.7</td>
</tr>
<tr>
<td>Overweight or obese</td>
<td>2.3</td>
</tr>
<tr>
<td>Diagnosed with HIV/AIDS</td>
<td>2.4</td>
</tr>
<tr>
<td>Diagnosed with the risk of stroke</td>
<td>2.1</td>
</tr>
</tbody>
</table>

The results of the study indicated that there are also differentials in the physical health conditions of the LGBT population in Ghana. The findings of the study revealed that the lesbians and the gays in Ghana have higher risks of cancer, being overweight or obese, and the risk of being diagnosed with stroke. Meanwhile, the results of the study indicated that bisexuals in Ghana have the risk of being diagnosed with HIV/AIDS more than the lesbians and the gays. One possible explanation for this finding is that bisexuals are found to multiple sex partners, and as such could easily get infected and also transmit the HIV virus (Fredriksen-Goldsen et al., 2013). The cause of these health disparities, according to a human right watch report, is the law that contributes to a climate in which violence and discrimination against LGBT people is common (Human Right Watch, 2018). This result is consistent with previous literature. More recent research in investigating the physical health of LGBT people outside Ghana revealed that, relative to heterosexuals, LGBT populations have higher rates of disability (Wallace et al., 2011), more physical limitations (Conron et al., 2010; Dilley et al., 2010), and poorer general health (Conron et al., 2010; Wallace et al., 2011). Elevated rates of HIV are also observed among gay and bisexual men (Centers for Disease Control and Prevention, 2013) and transgender women (Herbst et al., 2008; Schulden et al., 2008). Among lesbian and bisexual women, there are higher rates of overweight and obesity (Boehmer, Bowen, & Bauer, 2007; Case et al., 2004; Dilley et al., 2010). Some studies have also indicated LGB adults may be at elevated risk of some cancers (Case et al., 2004; Dibble, Roberts, & Nussey, 2004; Valanis et al., 2000) and cardiovascular disease (Case et al., 2004; Fredriksen-Goldsen, Kim et al., 2013; Hatzenbuehler, McLaughlin, & Slopen, 2013). Large population-based studies have found that LGB adults are more likely to report diagnoses of asthma than their heterosexual counterparts (Conron, Mimiaga, & Landers, 2010; Dilley et al., 2010).

Conclusion

Ghanaians who are lesbian, gay, bisexual, or transgender suffer widespread discrimination and abuse both in public and in family settings. These marginalization and discrimination experienced by the LGBT people have contributed to barriers to the access of health and support services (Leonard, 2002; McNair, Anderson, Mitchell, 2003). The findings of this study document population-based health disparities among LGBT population in Ghana. Early detection and identification of factors associated with such at-risk groups will enable public health initiatives to expand the reach of strategies and interventions to promote healthy communities in Ghana. It is imperative that policy makers, stakeholders, family members, health care professionals and the general public understand the health needs of these individuals so as to develop effective preventive interventions and services tailored to their unique needs. LGBT population in Ghana experience a number of health disparities, ranging from behavioural, physical and mental health. Discrimination and abuses have been found to be
contributory factor these health disparities among the LGBTs population in Ghana. On the other hand, the laws of Ghana, which criminalizes LGBTs contributes to an atmosphere in which violence and discrimination against LGBT people is common. It is therefore recommended that the law that criminalizes LGBTs in Ghana should as a matter of urgency be abolished to provide a serene atmosphere to alleviate the harassment, stigmatization and discrimination against the LGBTs in the country. The findings of the study revealed that the LGBT community in LGBT have poor mental health problems. As matter of urgency, mental health attention should be paid to these individuals to deal with their mental health issues. If not, in due time, Ghana will have an adult population with serious mental health problems. When this happen, the country will experience serious economic mishaps. One of the limitations of this study is the fact that the physical and the behavioural health conditions of the LGBTs was measured by the use of a questionnaire developed by the author. Although reliability and validity measures were observed, measuring the health status of the LGBTs through the use the questionnaire required the LGBTs to provide their response to the questionnaire. This approach comes with limitations as LGBTs may not provide a candid response to the questions. For instance, asking an LGBT to indicate whether he/she has been diagnosed with HIV/AIDS will not yield a candid response from them. Hence, a new methodological approach in subsequent studies should be used whenever the health status of an LGBT is being measured. The health condition could be measured by testing medically, or by the use of a medical instrument.

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