Registered nurses’ experiences of preventing pressure ulcers at a person receiving care at a hospital in Peru
A qualitative study

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ABSTRACT

Background
Globally pressures ulcers are commonly seen as hospital acquired injuries with negative consequences for the persons such as pain, suffering and also incurring high costs for society. Preventing the occurrence of pressure ulcers is an important part of nursing care and a professional responsibility for registered nurses. Person-centered care is one of the core competencies for registered nurses. Involving the person in their care and increasing the person’s knowledge about preventive strategies, person-centered care is of great value in the prevention of pressure ulcer.

Aim
The aim of this study was to describe registered nurses’ experiences of preventing the occurrence of pressure ulcers in persons receiving care in a hospital setting in Peru.

Method
A qualitative method was used with semi-structured interviews which were conducted at a hospital in Peru. Seven registered nurses participated in this study. The data was analyzed with a qualitative content analysis.

Findings
The findings of this study are presented under three categories formed during the data analysis: Incorporating pressure ulcer prevention into general nursing care, recognition of the need to develop knowledge about pressure ulcers and awareness of professional responsibilities in nursing care.

Conclusion
Providing nursing care, following closely hospital guidelines, provides a systematic way to prevent the occurrence of pressure ulcers in persons receiving hospital care. It is important that the nurse includes the person in the care process. The registered nurses underlined the importance of education in prevention strategies.

Key words: Nurse’s experience, Person-centred care, Peru, Pressure ulcer, Responsibility
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INTRODUCTION

Pressure ulcers (PUs) are hospital acquired injuries most commonly occurring in persons who are receiving hospital care. During our clinical practices, as part of our nurse education, an interest for the area arouse as PUs were observed in persons receiving hospital care in Sweden. Therefore, it was of interest to investigate how nurses in other health care contexts work with preventing PUs. Swedish International Development Cooperation Agency (2019) founded scholarship administered by Swedish Council for Higher Education. One of the scholarships in Sweden are Minor Field Studies (MFS), which is intended for students to gather material for their bachelor thesis (SIDA, 2019). Through the scholarship program MFS, the authors had an opportunity to collect material for their study in a hospital in Peru. In the literature there are different facts presented regarding the occurrence of PU in hospitals in Peru. There are limited articles available in English regarding this topic. Therefore, this qualitative interview study was planned to describe registered nurses’ experiences of preventing PUs in a hospital setting in Peru.

By the term experience the authors of the study refer to Nationalencyklopedin explanation that experience is; knowledge build by observation of the subject (Nationalencyklopedin, n.d.).

BACKGROUND

Peru

According to Central Intelligence Agency [CIA] (2019) Peru is located in the western part of South America, and had about 31 million inhabitants in 2018. Bolivia, Brazil, Colombia, Chile and Ecuador are neighboring countries to Peru, and the main language is Spanish. The majority of the population in the country are Indians (CIA, 2019), and World Health Organization [WHO] (2016a) describe Peru as a middle-income country.

Health care in Peru

To become a registered nurse in Peru the student needs to successfully complete a five-year educational program, the final year of the program involves internship placements. Even if the nurse education is in a private or public college all students who successfully complete their education receive a certificate (WHO, n.d.).

National health care is a priority in Peru (WHO, 2016a). According to Pan American Health Organization [PAHO] (n.d.) health care should be a right for every inhabitant, regardless of geographical location or socioeconomic status in Peru. The health system in Peru was reformed in line with the sustainable development goals which were adapted in 2015 and expected to be reached in 2021 (PAHO, n.d.). In this study Goal three; good health and wellbeing, is highlighted. Goal three is chosen as one of the four most important sustainable development goals to achieve for the authorities in Peru (United Nations, n.d.). Goal three includes how access to health care should be equal for all inhabitants (United Nations Development Programme, 2015).

Pressure ulcers

Pressure ulcers are also known as bed sores, decubitus ulcers, pressure injuries or pressure sores. Pressure ulcers, are one of the most common results of hospital injuries and is
therefore regarded as a global health issue (Tolulope Esan, Akinwande Fasoro, Funmilayo Ojo & Obialor, 2018). The National Pressure Ulcer Advisory Panel [NPUAP] (2016) explains that an injury to the skin or underlying tissue can be a PU. A PU may arise if the skin is exposed to external pressure or shearing (NPUAP, 2016). Pressure prevents the capillary flow to the tissues and leads to poor nutrition of the tissue. Hypoxia occurs and in turn causes a wound which can take a long time to heal (Gou & DiPietro, 2010).

According to the European Pressure Ulcer Advisory Panel [EPUAP] (2014) PUs are classified into four different stages. Degree I is the first stage where a body part has persistent discoloration (redness) of the skin. Degree II refers to when the body part begins to have a superficial epithelial injury. Degree III, where the skin develops full-skin defects without wound cavity or superficial necrosis. Degree IV, the final stage, the skin has a full-skin injury with a wound cavity, which can become necrotic and eventually damage muscle tissues and bones (EPUAP, 2014).

An in-hospital study executed by Cervantes-Alvino et al. (2018) in Peru showed that one third of 198 persons at the hospital had developed PUs during their stay at the hospital. Some risk factors identified in developing PUs were: old age and high risk scores on the Norton scale (Cervantes-Alvino et al., 2018). Zuñiga-Castro, Espinoza-Cáceres and Fernandez-Pacheco (2014) explains that occurrence of PUs is high in Peru. Peralta Vargas, Varela Pinedo and Gálvez Cano (2009) confirm this high prevalence and also highlight an association with malnutrition.

Persons at risk of developing pressure ulcers and risk assessment
Lyder and Ayello (2008) clarifies that to avoid the development of PUs, persons need individual assessments to identify if they are in the risk-zone. Lindholm (2017) explains that the risk of developing a PU differs between individuals. The main contributing factors to developing PUs described by Charalambous, Koulori, Vasilopoulos and Roupa are immobility, which affects many persons in a hospital setting (Charalambous et al., 2018). Lindholm (2018) mentions that immobility can depend on the person’s condition, for example; confined to wheelchair, difficulties in changing positions, paralysis, reduce feeling in parts of the body. Some other risk-factors highlighted were persons who are exposed to malnutrition, moisture or high temperatures, persons over seventy years old, dry skin, urinary and fecal incontinence, and smoking (Lindholm, 2018).

According to Lyder and Ayello (2008) it can take up to two to six hours to develop a PU, it is important to identify persons at risk of getting PUs as well as prevention. Different assessment tools are available to identify persons at risk of developing a PU, examples of such tools are the Braden scale and Norton scale which are used in health care worldwide. The Braden Scale has six subscales: sensory perception, moisture, activity, mobility, nutrition, friction and shear. The Norton Scale has five subscales: physical condition, mental condition, activity, mobility and incontinence (Lyder & Ayello, 2008). Ankles, elbows, heels, hips and lower spine are body parts where PUs often occur because they are close to bony prominences and where the skin that has been under pressure for a long period of time (Selby, 2011).

Consequence of pressure ulcers for persons and society
Developing a PU has a lot of consequence for the person concerned. It can increase stress levels which impact the healing process, creates pain, anxiety, reduced mobility and social
exclusion because of the odor that can come from the PU (Charalambous et al., 2018). Spear adds that the presence of a PU can create a lot of suffering for the person (Spear, 2013). Health-related quality of life becomes affected by PUs, and it has an impact on social, physical, emotional and financial aspects in people’s life (Essex, Clark, Sims, Warriner & Cullum, 2009; Barker et al., 2012; Gorecki et al., 2009). The occurrence of pain from the presence of a PU impacts on health-related quality of life, registered nurses fail to highlight the amount of pain that a PU can cause (Gorecki et al., 2009).

Developing an infection is a serious consequence of PUs and can result in pain, delayed healing and decline in well-being (Niederhauser et al., 2012; Gorecki et al., 2009). Dealey, Posnett and Walker (2013) emphasize the high economical costs surrounding the treatment of infections related to PUs.

Lyder and Ayello state that pressure ulcers are not only painful for the persons concerned, but also cost the society a lot of money. Treating PUs costs 2.5 times more than preventing them (Lyder & Ayello, 2008). Registered nurses should prioritise the prevention of PUs while caring for persons (Samuriwo, 2012). The presence of PUs requires expensive treatments such as complex dressings, surgical costs and requires the attention of health professionals (Latimer, Chaboyer & Gillespie, 2013).

Registered nurses’ professional responsibilities

When a person becomes a registered nurse, there follows a professional responsibility and it can be seen in different ways; promote health, to prevent illness, to alleviate suffering and to restore health (International Council of Nurses [ICN], 2012). Akerjordet, Furunes and Haver (2018) explains from their perspective that a significant health promoting work needs to have a strong nurse leadership. A registered nurse as a leader has an important role when it comes to health promotion education, to mold new ways of working and incorporate evidence-based knowledge (Akerjordet et al., 2018). According to Greiner and Knebel (2003), evidence-based health care is included in the core competencies of registered nurses. It is important for registered nurses to always stay updated in their professional role, in order to be aware of developments in health care (Greiner & Knebel, 2003).

The registered nurses’ professional responsibilities have also ethical perspective which includes, respect for human rights, sees all persons’ values and their right to care. ICN (2012) explains that registered nurses have a responsibility to provide nursing-care to the person, the family and the community, in cooperation with other health care staff, i.e. certified nursing assistant (CNA). Wallinvirta (2011) continue to explain that registered nurses help the person to communicate with the doctor, support well-being and make ethical decisions based on laws and regulations.

In Peru, registered nurses’ competencies include according to law the following: promote health care, promote life, contribute to the countries socio-economic development and promote public health (Congreso de la República, 2002).

Registered nurses’ responsibilities in preventing pressure ulcer

Gonzaga de Faria et al. (2019) means that registered nurses need to have knowledge and work evidence-based in order to prevent the development of PUs. Insufficient levels of
knowledge were observed among registered nurses resulting in serious health problems for persons they cared for (Gonzaga de Faria et al., 2019), according to Chaboyer and Gillespie prevention of PUs is a global sign of quality in nursing care. The four main preventive strategies are: risk assessment, good skin care, good nutritional and encouraging mobility (Chaboyer & Gillespie, 2014).

Prevention of the occurrence of PUs in persons seeking care is an important aspect of the registered nurses’ clinical work. This includes identifying persons at risk. It is important that the nurses work systematically and uses validated risk assessment tools in their identification of persons at risk of developing PUs (Tolulope Esan et al., 2018). Furthermore knowledge is required regarding the risk assessment scales and preventative strategies in working with PUs (Gonzaga de Faria et al., 2019).

Ji-Kyo, Sung-Hee, Ju-Hee and Jae-Kyun (2019) emphasize the importance of using evidence-based guidelines in order to reduce the cost of care and provide optimal care for the person. Sving, Gunningberg, Högman and Mamhidir (2012) mention by working according to the guidelines nurses can help reduce the occurrence of PUs by 50 percent in persons receiving care (Sving et al., 2012).

According to Greiner and Knebel (2003) registered nurses have six core competencies: working evidence based, person-centered care (PCC), patient safety, quality development, informatics and teamwork. Regarding patient safety the registered nurses should prioritise the safety of all patients in nursing care and eliminate the risk of causing harm (Greiner & Knebel, 2003). Pressure ulcers are considered as harm and are hospital acquired. With this in mind registered nurse need to have knowledge and ability to identify persons at risk of developing PUs (ICN, 2012). Hyeon-Hee and Soukyoung (2019), consider that registered nurses can enhance their knowledge of safety care and self-efficacy by training and education connected to patient safety.

Person-centered care – theoretical point of departure

Person-centered care enables the person to be seen as unique with individual needs (McCormack, 2003). Fix et al. (2018) describes PCC as the value of knowing the person behind the patient who should not be seen as their diseases. The term patient is only associated with a sick body connected to the hospital, the focus of PCC is to see the individual. Person-centered care forms a partnership between the person and the registered nurse, the partnership includes empathy and respect for the person (Fix et al., 2018).

According to Ekman et al. (2011) there are three procedures for guaranteeing PCC in hospital care. These procedures include: listening to the person’s story, sharing information to make decisions together and finally documenting the story (Ekman et al., 2011). Respect and an understanding of the person helps build a therapeutic relationship between the person and the registered nurse (Ekman, Norberg and Swedberg, 2015). McCance, McCormack and Dewing (2015) describe how PCC entails the involvement of the person in their care and the importance of providing holistic nursing care. Wallström and Ekman (2018) confirm that the focus of PCC is not only about diseases and restrictions that accompany diseases, the focus is about the person’s health.
Person-centered care and preventing pressure ulcers

According to Kane-Urrabazo (2007), it is necessary for registered nurses to put persons first, and in that way take the responsibility for helping and caring for persons in need of care. Wallinvirta (2011) highlights the importance of open communication between the person and the registered nurse, Söderlund (2017) emphasized that this encourages the person to be more involved in their own care.

A person at risk of developing a PU should be involved in the prevention strategies, by creating a partnership in care. It is of importance that registered nurses identify the persons motivation and possibility of preventing PUs (McInnes, Chaboyer, Murray, Allen & Jones, 2014). McInnes et al. (2014) identified almost half of the patients in their study understood what PUs were and together with the registered nurses they used evidence-based prevention strategies to reduce the risk of develop PUs. Tobiano, Marshall, Bucknall and Chaboyer (2015) highlight the importance of the sharing of information about PUs and thereby making the person active in the own preventing-strategies and care.

According to Tobiano et al. (2015) preventing PUs and integrating PCC can create some challenges for both the registered nurse and the person concerned. The person must have a willingness to be involved in their own care, it is important to be aware that role confusion between the registered nurse and the person can arise. To overcomes these challenges further education is necessary for registered nurses about PCC (Tobiano et al., 2015), McInnes et al. (2014) explain that the inclusion of PCC in registered nurses’ clinical practice is based on the fact that the person they are caring for is empowered with knowledge surrounding the development of PUs.

Research area

Research shows that health care in Peru is a national priority but the information surrounding the occurrence of PUs in persons receiving care in Peru is uncertain. Pressure ulcers are one of the most common outcomes of acquired injuries in hospitals worldwide, it is of great importance for registered nurses to follow evidence-based guidelines as a preventative measure.

Pressure ulcers is seen as an injury caused by health care therefore it is of great importance that registered nurses take their responsibility to ensure the safety of the patient during their hospital stay. Prevention strategies are a part of registered nurses’ responsibilities to ensure quality of nursing care. Negative consequences can occur and are common in the presence of PUs for persons receiving care.

With this interview study the authors’ aim is to examine registered nurses’ experiences of preventing PUs and illustrate their knowledge and strategies of the subject.

AIM

The aim of the study was to describe registered nurses’ experiences of preventing the occurrence of pressure ulcers in persons receiving care in a hospital in Peru
METHOD

Design

A qualitative method with semi-structured interviews was selected in accordance with the aim of this study (Polit & Beck, 2017). A semi-structured interview entails the use of open-ended questions and allows the study participant to elaborate on the topic under discussion (Danielson, 2017a). Qualitative research is regarded as having a flexible design (Polit & Beck, 2017). An inductive approach was used in this study, which means that the authors’ are aware of their pre-understandings of the participants’ experiences (Henricson & Billhult, 2017). The authors were aware that the truths presented by the participants are subjective which limits the possibility of being able to present a global truth from the qualitative interview study (Priebe & Landström, 2017). This is regarded as a relativistic awareness, a pre-understanding of knowledge the authors should have prior to commencing the study. A topic guide (appendix A) has been a support under the interviews (Polit & Beck, 2017).

Study participants

The participants for the interviews were selected by using a convenience sampling method. This entails that participants voluntarily reported themselves to take part in the study, therefore convenience sampling can be referred to as volunteer sample (Polit & Beck, 2017). Convenience sample was selected because of the timeframe and the context of this bachelor thesis. According to Polit and Beck (2017), sample size was guided by the information data that was needed for this study. The hospital in this study was selected because the authors had previously contacted the Managing Director to receive permission to be perform the interviews in this study. The authors were interested in gathering registered nurses’ experiences of prevention PUs in a rural area as opposed to an urban area where the authors have previous knowledge from their clinical training.

Inclusions criteria

The inclusion criteria in this study were that the participants were registered nurses, and were willing to participate in the study and work at the hospital were the study was performed. The participants needed to know the language which the interpreter spoke, which were English and Spanish.

Description of the participants

The registered nurses who were interviewed worked in different wards within the same hospital. These wards had diverse specialities from: Intensive care to Neonatal wards. The participants experience as a registered nurse varied between five to 12 years. A total of five females and two males were involved in the interviews, the participants spoke Spanish.

Data collection

Collecting data through interviews is a significant method when qualitative content analysis is used to analyze the data (Danielson, 2017b). To find a hospital to perform the interviews, five hospitals were contacted by the authors with a letter of information about the study (appendix B). One director at a hospital accepted the request and signed the authorization form (appendix C). Thereafter, with help of the interpreter registered nurses
were asked at the hospital if they wanted to participate in the study, seven registered nurses agreed to take part in this study.

**Topic guide**
A topic guide with variations of semi-structured questions was composed, Polit and Beck (2017) describes a topic guide as a schedule for semi-structured interviews with questions or themes that the participants can talk freely about. In gather more details about the subject under investigation some follow-up questions were included. Polit and Beck (2017) mention the order in the topic guide should be logical, starting with general questions and then progressing to specific questions about prevention of PUs. Themes in the topic guide were background, working environment, nursing and last general questions (appendix A). First the questions were written in English, then translated to Spanish by the interpreter. The authors had the topic guide with them during the interviews.

**Pilot interview**
In this study a pilot interview was carried out. This is in accordance to Danielson (2017a) who explains a pilot interview is required to test the topic guide, furthermore it gave an opportunity to test technical equipment. The pilot study was transcribed verbatim to see if changes were needed in the topic guide (Danielson, 2017a). After the pilot interview no changes were made in the topic guide therefore the pilot interview was included in the results.

**Interview session**
All seven interviews were carried out with registered nurses during working hours in their workplace. According to Polit and Beck (2017), the interview should be performed where the risk of being disrupted is low and is appropriate place for audio-recording. Therefore, the interviews were performed in a secluded part of the hospital which the participants had chosen. Three participants declined audio-recording because they did not feel comfortable be recorded. The topic guide was not handed out before the interview; therefore, the participants gave spontaneous answers. To inform the participants about the study, written and oral information of the study was described and handed out before the interview started (appendix D). The interpreter translated the information about the study for the participants however this was hand written information and was not given to the authors. Email address and phone number to one of the authors were handed out to the participants after the interviews if contact was required. Light discussions between the participants and the authors were carried out before the interviews, to create a relaxing atmosphere.

The topic guide was used during the interviews, not all questions were selected in all interviews depending on the answers the participants gave, follow-up questions were asked if necessary. The interview was performed in Spanish by the interpreter, the questions were asked in English and the interpreter translated them to directly to Spanish and repeated the answers from the participants in English. Not all participants wanted to be recorded, therefore both authors were involved during the interviews, one asked the questions and the other one took notes. Notes were taken even when the interviews were recorded. The interviews lasted in between 15 and 20 minutes.
Data processing

Transcription of the interviews
Before starting the data analysis, transcription of the recording interviews needed to be completed, which means that the audio-recorded interviews were written verbatim (Polit & Beck, 2017). Four of the interviews were audio-recorded, the transcription begins by listening to the recordings then listening to them again and reading through the transcription to see if something had been missed. During the other three interviews extensive notes were taken and directly after the interviews the authors went through the notes and added more notes if something had been missed. Afterwards the authors wrote down the notes in a document on the computer to analyze later.

Data analysis

A qualitative content analysis of semi-structured interviews was selected. As Graneheim, Lindgren and Lundman (2017) explains, is an approach when analyzing qualitative data. How categories are interpreted and connected to the aim is an important question according to Graneheim et al. (2017). Qualitative content analysis was made with focus on the manifest content in the interview’s texts, which Graneheim and Lundman (2004) describes as the obvious content. Manifest analysis approach is what the texts says, and the researchers read from the interview texts and presented it in categories that are the aspects of the content (Graneheim & Lundman, 2004).

To be able to analyze what the text is about, an inductive content approach was chosen. According to Krippendorff (2018), a inductive content approach is a scientific tool that increases the understanding of the phenomena.

With the help of Graneheim and Lundman (2004), the data has been able to get analyzed. In accordance to Graneheim and Lundman a selecting of analysis units has been made, the analysing steps are based on Krippendorff content analysis (Graneheim & Lundman, 2004). The interview data has several times been read by the authors individually for analysis and to make a general picture, thereafter the authors compared the analysis with each other to find the result. During the analysis meaning units has been selected and marked as being relevant to the studies aim. Graneheim and Lundman (2004) describe in order for the context to remain, surrounding text is included. At the next step, meaning units had been cut down but still the important content has been maintained. This step is called according to Graneheim and Lundman (2004) condensation, but they suggest abstraction then a higher logical level of interpretations is emphasized. The authors had then worked together to create subcategories and categories (see table 1) that reflects the meaning of the data. From the data that was collected during the interviews had seven subcategories been identified and three categories had incurred of the subcategories.

Table 1. Data analysis, example of meaning unit, condensed meaning unit, code, subcategory and category

<table>
<thead>
<tr>
<th>Meaning unit</th>
<th>Condensed meaning unit</th>
<th>Code</th>
<th>Subcategory</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>“We turn the patient every two hours”</td>
<td>Turning the patients and using</td>
<td>Prevention strategies</td>
<td>Evidence-based prevention strategies</td>
<td>Incorporating pressure ulcers prevention into</td>
</tr>
</tbody>
</table>
meaning move
the positions of
the patient, at
the ward we
use madrass of
gel and
balloons”
mattresses of
gel and
balloons
general nursing
care

Ethical considerations

A very important point when it comes to ethics is informed consent, it has a meaningful role when persons are involved in the research. Autonomy is an important ethical principle to be aware of in research which means that a person is empowered to make their own decisions (Kjellström (2017). According to Sandman and Kjellström (2013), to be able to promote the participants’ integrity, it applies to respect the participants self-determination, which is an important part in an ethical approach. Declaration of Helsinki, the World Medical Association [WMA] (2013) underlines that each participant must provide an informed consent. The participants were informed about the study before consenting to participate in the study, which the WMA (2013) emphasizes is a voluntary informed consent. The participants signed a confirmation of participation in the study (appendix D) and information about that the participation could at any time be retracted, in accordance with World Medical Association (2013).

By using interviews as data collection, it is important that the participants are not identified by persons who read the study, this is called confidentiality. This can be confused with anonymity, but it means that not even the researcher can identify the participants identity (Kjellström and Sandman, 2013). Kjellström (2017) emphasizes that preserving participants confidentiality maintains the participants’ integrity. World Medical Association (2013) emphasized that it is important that the researchers keep the confidentiality of the participants in mind throughout the entire research. The material was kept locked in a secure area and kept away from unauthorized people. The interpreter was informed about the confidentiality and signed a confidentiality form which said that the interpreter will not give out the information that was shared from the participants during the interviews (appendix E).

A risk and benefit analysis of the participants was made before this study was conducted to make sure that the benefits outweighed the risks or were in balance. The method was designed to answer the aim of the study and attempted to balance the fact that the participants invested their time in participating in this study (Swedish Research Council (2017).

An ethical consideration when using qualitative interviews as a method is that the participants can answer the questions to please the researchers and provide answers which they feel they want to hear. Kjellström and Sandman (2013) emphasizes as well that the participants can feel forced to go through with the interview because they experience that the authors have a powerful position. This is something the authors needed to reflect about and keep in mind throughout the interviews and during the whole study.
FINDINGS

The findings of this study are presented under the following three categories (see table 2): Incorporating pressure ulcers prevention into general nursing care, Recognition of the need to develop knowledge about pressure ulcers and Awareness of professional responsibilities in nursing care.

Table 2. The subcategory and categories

<table>
<thead>
<tr>
<th>Subcategories</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence-based prevention strategies</td>
<td>Incorporating pressure ulcer prevention in general nursing care</td>
</tr>
<tr>
<td>Knowledge of risk factors and risk assessments</td>
<td>Recognition of the need to develop knowledge about pressure ulcers</td>
</tr>
<tr>
<td>Compliance to guidelines</td>
<td>Awareness of professional responsibilities in nursing care</td>
</tr>
<tr>
<td>Develop knowledge through evidence</td>
<td></td>
</tr>
<tr>
<td>Knowledge development through education and practice</td>
<td></td>
</tr>
<tr>
<td>Person-centered care and patient safety</td>
<td></td>
</tr>
<tr>
<td>Registered nurses’ professional role</td>
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</tr>
</tbody>
</table>

Incorporating pressure ulcers prevention in general nursing care

Participants mentioned different prevention strategies to reduce the risk for a person to develop a PU. An important aspect associated with prevention strategies was the ability to identify a person at risk. All the participants mentioned that strategies were connected to the evidence-based guidelines in their hospital. Under this category three subcategories emerged to describe the participants experience of reducing the occurrence of PUs. The subcategories were Evidence-based prevention strategies, Knowledge of risk factors and risk assessments and Compliance to guidelines.

Evidence-based prevention strategies
The evidence-based hospital guidelines were, for all the participants, a support and a source of information about prevention strategies. Participants described similar prevention strategies, some described that if a person was at risk of developing a PU, an air-mattress was necessary to reduce the risk. Another participant explained that there is not enough air-mattresses at the hospital, therefore, it is important that the registered nurse could prioritise those persons most at risk. A common strategy described at the hospital is the possibility of using balloons at pressure points or the use of bed mattresses made of gel. It was described that during surgery registered nurses were responsible for moving the person and using pillows of gel to minimize pressure on the body parts. In cases where the person had a PU it was important to clean the wound to speed up the healing process.

“We are using pillows at pressure points both pillows with gel and with hole and balloons to reduce the pressure.”
All the participants underlined the importance of creating a turning schedule for the person at risk. Before the guidelines were established, a person was turned routinely every two hours if at risk of developing a PU and closely observed. Participants stated that they still turn the persons at risk of developing PU depending on the scores of the Norton scale. Nutrition was highlighted as an important factor to have in mind in caring for persons at risk of developing PU, a nutritious diet aided the healing process.

“Turing schedule, which fabric for bed, fabric of clothes, which mattress and how much food they eat is important things to remember.”

“The most important routines are that patients have turning schedule we do not have many overweight but it is always important to keep track at turning schedule /.../.”

Knowledge of risk factors and risk assessments

Among the participants knowledge of risk factors of developing PUs were varied. Some only used Norton scale to identify if a person was at risk of developing PUs, while others stated that they used both Norton scale and other criterions to identify persons at risk. Overweight and immobility were commonly identified as risk factors for a person to develop a PU.

“I do not know another method to identify since the Norton scale is useful.”

“Have extra control of patient that can not move, multi fracture, problem with head (head trauma), or spinal injury (TES) and older persons /.../.”

Elderly patients were also regarded as a group of persons who were at risk of developing PUs. Many of the participants emphasized the importance of having extra observation of elderly persons to reduce the risk of them developing PUs. Persons receiving high technological care i.e. connected to a ventilator, and those with incontinence were also regarded as persons at risk. When a person is admitted to the ward the registered nurse evaluates directly if a person has a risk of developing PUs. A participant underlined the great importance that the registered nurses should carry out the evaluation several times during the care period. Participants explained, aside from completion of the Norton scale, it was also important to observe and protect possible red irritated points of the person’s skin if there were any.

“I have criteria like if they [patients] lay a lot in bed, elderly persons, which diagnose they have or can not move, if they have a criteria, I used preventing strategies so the person not develop a pressure ulcer.”

“First we go through Norton scale and we are very careful and see if the patient is dry and the patient is not moist and right here, at the unit IVA, many patients are not in consciousness and then we are responsible for changing clothes on them and clean the patients and helps them turn in the bed.”
According to the guidelines, the registered nurses were supposed to use the Norton scale, there was great confidence in the scale among the participants. Some participants felt that the only way to identify a PU is by the Norton scale and had total trust to it. Completion of the Norton scale has valuable tool to used when a person is first admitted to the ward, to identify if they are at risk of developing PUs. This according to the guidelines was the responsibility of the registered nurses. The participants had no knowledge about the Braden scale.

“The Norton scale is well done, and I would not want to change it.”

“How long ago we use Norton scale for five years. It helps us a lot when we see patient to see if they have any risk or if they have pressure ulcers that we can evaluate.”

**Compliance to guidelines**

All the participants at the hospital emphasized that it is of great importance that the registered nurses follow the hospital guidelines of how to prevent and avoid the risk for a person to develop a PU. A participant has developed these guidelines and gave the perspective of why the registered nurses need to follow these guidelines. The goal with these guidelines were to avoid PUs at the hospital, the participants emphasized that the guidelines in this hospital helped to reduce the occurrence PUs.

“When I have meeting patient before the guideline sometimes we saw muscles and bone; some patients had died because of a pressure ulcer.”

“When at the hospital the prevention of pressure ulcers is good, the fact is that is not common with pressure ulcers developing here.”

The participants explained that the guidelines created confident to the registered nurse when it comes to preventing PUs, information of how to identify the risk of developing PUs is one part of the guidelines. It is supportive to have a risk scale to identify PUs. All the participants highlighted the benefits of having the guidelines, through the obviousness in the guidelines it was easier to know how to prevent PUs.

“I do not know how to identify if a person has a risk /.../ but guideline help us how to see the risk and by that we now know how to see the risk.”

” When the people already have pressure ulcers it is a very good experience to follow the guidelines /.../.”

**Recognition of the need to develop knowledge about pressure ulcers**

Having knowledge about how to prevent PUs were important among the participants. Different strategies of developing knowledge of PUs were shared. From the data two subcategories arises, Developing knowledge through evidence and Knowledge development through education and practice.
Developing knowledge through evidence

Evidence-based prevention strategies are required emphasized the participants, the guidelines at the hospital has been developed by evidence, explained a participant, who developed these guidelines. By reading new articles, new preventing methods can arise in order to find new materials to prevent and treat this type of wounds, also to get more knowledge of PUs.

“Give the best quality of care, evidence care which means it needs to be proof of the preventing strategies we do for the patient.”

If a person develops a PU while receiving care which is degree two, three or four, the first thing to do is to treat and heal the wound. Thereafter continue with turning schedule and air mattress. If the PU is in degree one a further assessment is made. The participants underlined knowledge of material can be increased by reading new articles.

“We buy new material we learn about in articles because it constantly coming new strategies and material to prevent and heal the wound.”

All participants highlighted the importance of keeping updated with new evidence about PUs by reading articles and going through new research. By reading articles new knowledge can be developed among the registered nurses. The participants emphasized the meaningful part of using scientific articles to improve the knowledge of preventing PUs but also to treat PUs.

“Find new working methods by be update of new information.”

Knowledge development through education and practice

Most of the participants explained that more preventing classes should be conducted, now it is more about treatment of PUs. Thereafter, underlined all the participants how it is of great importance to study to keep on developing knowledge and avoid PUs at the hospital. By studying, the participants meant going on extra lecture or courses.

“Get lectures here or outside the clinic.”

The participants emphasized that not only the registered nurses’ needs knowledge of preventing PU, also the person and their relatives. Explaining different preventing strategies to do home or the benefits of having an air-mattress, are some parts that the registered nurse educate to the person and one’s relatives.

“Work with the families by learn what they [patients and relatives] should do at home to prevent pressure ulcer, have always in mind the family’s income, and education how to turn the patient so they know at home how to do.”

Different suggestions from the participants came up for expanding the registered nurses’ knowledge of preventing PUs. The participants described that the hospital sometimes has education of PUs performed by workshops and shorter lectures.

” It is necessary to study more in classes and most of the experience will you get when you are working.”
Some participants described that they did not have much experience of PUs depending on which ward the registered nurses worked at. Some participants thought it is not enough education in the registered nurses’ education in general in Peru of preventing PUs. Therefore, the participants explained that they developed some of the knowledge by experience of developed PUs during their practice.

“Mostly nurses develop their knowledge by experience, because here we do not have access to bigger courses, more in lima. We have not the opportunity to go to courses in Lima thereby go on experience or smaller education opportunities here.”

Awareness of professional responsibilities in nursing care

Some of the questions during the interviews gave answers to the registered nurse role of preventing PUs and responsibility which resulted in two subcategories in the analysis process, Person-centered care and patient safety and Registered nurse’ professional role.

Person-centered care and patient safety

Some participants mentioned the importance of always working person-centered, by working with the patient to reduce the risk for the person to develop PUs. Thereby the participants explained that registered nurses’ need to spend time with the person. A participant explained the importance of teamwork in the whole team but emphasized the registered nurse had the main responsibility of the person when it comes to identifying the risk of developing PUs. Another described that at the hospital, they always thought person-centered in the nursing care.

“We have manuals there it says how we should work as a nurse and how we should work with patients.”

According to the participants it is important that all persons are comfortable and secure, which is the registered nurses’ responsibility to ensure that the patient safety is good during the receiving care at the hospital. Look how the person are and take care of the person, described some participants as patient safety.

“When they [nurses] come here and work or for all actually is important to see patient and our goal at the hospital is that the patients is safe.”

Registered nurses’ professional role

In cases of persons who had developed a PU, according to a few participants the registered nurses’ role at the hospital is to identify the grade of PUs, thereafter, establish preventing strategies to reduce the risk of new PUs and treatments for the wound. By that give the best quality of care emphasized the participants.

“In relation to pressure ulcer, the responsibility is the top and the nurses need to reduce the risk of develop a pressure ulcer in general. One of the responsibilities for the nurses is to prevention the pressure ulcer. The first level of health is prevention, so it is important.”
The participants described that they felt a responsibility of preventing PUs, and to see the person which is an important responsibility. By that fact the hospital has developed different guidelines of the registered nurses’ responsibility and one of them is how to prevent PUs.

“It is my responsible if I see that a patient has develop a pressure ulcer then it is my fault because it is my responsible that the patient should not develop it.”

From the nursing education in Peru the participants had learned that the responsibility is to take care of the person. The participants view of their responsibility is that it is important to make sure the person is well, heal fast and avoiding complications. Some participants underlined the importance of being the person’s voice, meaning stand up for the person in front of the doctor and if the person need help to explain something to the doctor, it is the registered nurses’ responsibility to help.

” Here in the clinic is one of our values to be responsible and it is very important to be responsible.”

“Everyone who has passed the nursing education has learned that they should do the usual that is turn the patient, but it is also about the fact that one as a nurse should be aware how to take care of its patients and check how they are and how they look.”

DISCUSSION

Discussion of findings

The main findings were registered nurses’ different strategies used to identifying if a person was at risk of developing PUs and the importance of working after hospital guidelines. Thereafter, the findings show the registered nurses’ approaches of continuing developing their knowledge of PUs prevention and core competence related to registered nurses’ responsibility.

Among the participants a positive attitude existed in their work of preventing PUs. The participants had a lot of different knowledge of preventing strategies and risk factors depending on which ward they worked at. This can be explained by the fact that the occurrence of PUs varied in the hospital depending on the ward, which Lahmann, Kottner, Dassen and Tannen (2011) explains the risk of developing PUs is more common in an intensive care ward than a regular hospital ward. The registered nurses mentioned overweight as a risk factor, Alhaug, Gay, Henriksen and Lerdale (2017) explains that a person who is malnourished has a higher risk of developing PU. Further, Liu et al. (2019) describes that a person with reduced mobility who is malnourished, easier develops PUs because of the person’s muscle loss. A thought to be aware of is that malnutrition often is associated with underweight, but a person who is malnutrition can be both underweight and overweight. It is that the person has an imbalance of nutrition intake (WHO, 2016b). The participants expressed that nutrition is an important factor when preventing PUs, it is important that the person gets the right energy to reduce the risk of developing PUs. In accordance with Charalambous et al., 2018) immobility is a common contributing factor...
which the registered nurses’ experienced, even thoughts of the high risk for elderly persons are described by both the study participants and Lyder and Ayello (2008). Connected with PCC, the registered nurses should focus on the person (Wallström & Ekman, 2018), as were described by the participants surrounding the identification of risk factors.

The participants mentioned that an important preventing strategy if a person is not available to move by them self, is to turn the person regularly and create a turning schedule. There are many different prevention strategies of PUs, Chaboyer and Gillespie (2014) describes four main preventive strategies; good skin care, good nutrition, encouraging mobility and risk assessment. The participants pointed out pillows and turning schedules as important strategies. Most important it to involve the person by tailoring the strategies after the person’s ability and motivation. This can be seen as a part of PCC to involve the person and increase the knowledge of PUs (Tobiano, Marshall, Bucknall & Chaboyer, 2015).

Norton scale is one way to identify the risk of developing a PU and is common worldwide, the participants also described many other important risk factors of PUs to identify. Norton scale is a great risk assessment and it is important to discuss if the registered nurses can only rely on it. Pancorbo-Hidalgo, Garcia-Fernandez, Lopez-Medina and Alvarez-Nieto (2006) state that Norton scale is a great complement to registered nurse’s clinical judgment, but Norton scale can not reduce the occurrence of PUs. A consideration is that to working with PCC the participants should focus more on the person, not the scale. Braden scale that can be used to evaluate if a person has a risk of developing PUs was not mention by any of the participants. Both scales are common worldwide (Lyder & Ayello, 2008) but one explanation that the participants only had mention Norton scale can be because Norton scale is a part of the guidelines at the hospital.

One recurrent area referred to by the participants in this study was their references to hospitals guidelines, Ji-Kyo et al. (2019) and Sving et al. (2012) points out the importance of evidence-based guidelines which is accordance to the hospital’s guidelines used by the registered nurses. According to Padula and Black (2019) compliance of guidelines from registered nurses enhance the prevention of PUs, through evidence-based guidelines PCC can be implemented (Kim, Kim & Kim, 2018). By working alongside the guidelines, the participants appeared confident and experiences that after implementation of the guidelines, occurrence of PUs at the hospital was reduced as Ji-Kyo et al. (2019) also explains in their study. Santin Junior, Rodrigues Carrara, Possidônio, Peixoto Larêdo and Pimenta Nogueira (2019) strengthen the argument of evidence-based tools as a great support for registered nurses during their daily working tasks to observe personal factors of a person.

A consideration of compliance towards the guidelines is that the importance of putting the person first, the pillar in PCC (Seers, 2000), can be left out. The focus from the participants was often only on prevention and did not put the person in center. On the other hand, the participants expressed several times that they worked with the patient, which can be influenced by PCC without knowing exactly what PCC means.

Gonzaga de Faria et al. (2019) emphasize the importance of having knowledge about preventing PUs, otherwise it can result in a serious health problem which the participants also discussed. The participants described different perspectives of developing knowledge
of PUs. Evidence-based care is one important way (Gonzaga de Faia et al., 2019), which Akerjordet et al. (2018) agree with. Akerjordet et al. (2018) also add that the director of registered nurses has an important role to increase knowledge by education based on evidence among registered nurses. ICN (2012) describe registered nurses’ responsibility of continuing developing knowledge to ensure the quality care standards by education, articles, distance courses and workshops, thereafter, developing guidelines based on evidence. The registered nurses’ have a lot of responsibility towards preventing PUs, the participants described the problems with courses because most of them were in Lima.

Registered nurses have a professional responsibility which can be explained in different perspective. An aspect of nursing care is to promote health. Congreso de la República (2002) underlines one responsibility of protecting a patient's life. By that a consideration is that promoting health can be connected to preventing PUs. Because it comes with negative consequences towards the person who develop a PU which strengthen the importance of avoiding the occurrence of PUs. As ICN (2012) explains, registered nurses have a responsibility to relieve suffer. Both Wallinvirta (2011) and the participants describes the registered nurses’ responsibility of listening to the person, which increase well-being. As Congreso de la República (2002) state the registered nurses’ in Peru have a responsibility of facilitating health care.

In the findings some of the core competencies for registered nurses were discussed by the participants; evidence-based care, patient safety, teamwork, PCC and quality development (Greiner & Knebel, 2003). One of the participants who developed the guidelines explained that after identifying lack of knowledge and a need for quality improvement, the guidelines were created and established at the hospital. Quality improvement in nursing is explained by Greiner and Knebel (2003) as that it can be developed after a critical reflection of routines at a hospital. The hospital has other guidelines as well that had been developed after identifying areas in need of improvement. Another thought is that some participants were very interested in knowing how registered nurses are working in Sweden with preventing PUs, it can show a will of improving the own knowledge or developing the hospital guidelines. The participants described several times evidence-based care as important, Gonzaga de Faria et al. (2019) mention that it is a responsibility of working evidence-based. Greiner and Knebel (2003) agree with the participants experience of that it is important to use approved methods based on science while for example preventing PUs.

The hospital guidelines seem to help ensure the safety of persons during nursing care. Pressure ulcers can seen as a harm to the person caused by the health care (ICN, 2009), which clear the importance of taking the responsibility and have knowledge of identifying risk factors of a person and PUs prevention. Some of the participants failed to mention the importance of ensuring patient safety, but all of them highlighted several times the importance of following the hospitals guidelines. Because of all the consequence PUs leads to for the person, preserving the safety of the person is meaningful. There are both a lot of suffering for the person and the society, as Charalambous et al. (2018) and Samuriwo (2012) emphasized, therefore, it is of great importance to prevent the occurrence of PUs. A consideration is if the registered nurses is updated with the latest research the patient safety enhances which McCoulough (2019) clarifies.

The whole team had the responsibility to reduce the risk of developing PUs, but registered nurses had the largest responsibility mentioned by the participants. This is in line with
research carried out by Tolulope Esan et al. (2018), registered nurses received more knowledge about PUs during their nursing education than other health care professions. With help of CNAs and other health professionals, they can together prevent the occurrence of PUs by having a holistic view with different insights from different health professions. McCoulough (2019) agree with that when health professionals work together they give holistic care based on knowledge of PU preventing strategies. One thought that came up when it comes to preventing PUs, is how important it is to involve the person in the process and make sure that the person gets an opportunity to share their own experience. It is, after all, the person who is suffering from PU that has the best insight and should therefore be able to share the information and thoughts with the health professionals in the team that works around them. Tobiano, Marshall, Bucknall and Chaboyer (2015) are pointing out the importance of sharing information about PU prevention to the person.

To integrate PCC McInnes et al. (2014) emphasize the importance of involving the person which partially emerged in the interviews with the participants. At the hospital knowledge of the concept PCC is mixed but the participant pointed out the importance to work with the person which is a part of PCC. One important experience to highlight is the education the registered nurses’ give to the person and relatives which in accordance to McInnes et al. (2014) explains the meaningful part of making sure the person has knowledge of PUs and risk factors of developing PUs. This becomes easier if a relation between the registered nurse and person is established. On the other hand, it can arise challenges with PCC with a confusion around the role as a registered nurse and the patient (Tobiano et al., 2015), a reflection is that if the registered nurses are confident in the role as a registered nurse, working person-centered and has great knowledge of PUs, the challenges can be reduced.

Discussion of method

As Henricson and Billhult (2017) describes, a qualitative study is a strength to use if the aim is to describe the clinical experience of a phenomena, Graneheim and Lundman (2004) adds that the credibility increase if the most appropriate method to answer the aim is chosen. The aim of this study would not be answered with a quantitative method or a systematic review because the formulation of the aim is structured in another way with these methods. A systematic review would have been difficult because the articles about PUs in Peru are mostly in Spanish. The flexibility of the design in a qualitative method made it easier to examine the aim (Polit & Beck, 2017) because an exact number of participants was not needed to be decided before arriving to the interview location.

The fact that this bachelor thesis had limited time, fewer participants were asked to participate in the study. An awareness of reduced quality because of few participants (Mårtensson & Fridlund, 2017) had been taken into consideration. A convenience sample can be seen as a weakness because not enough information-rich can be provided (Polit & Beck, 2017), but the framework of this thesis was one reason to the choice of sample. The study was only conducted at one hospital therefor snowball sample was not an option and purposive sampling could have limited the participants (Polit & Beck, 2017) that already were stressed because of lack of time to participate in the interviews. Although the interviews were around the time that the registered nurses had been informed about in the contact letter (Appendix B). Polit and Beck (2017) underline that purposive sampling is most common in qualitative study, participants that most benefits to the study participate which can increase the credibility.
Kjellström and Sandman (2013) discuss that the answer from the participants can be what they think the authors wanted to hear, an imbalance of the power can emerge. Contrariwise an imbalance of the power could in this study been between the director, who was contacted about the study, and the participants. Because according to Polit and Beck (2017), one weakness with convenience sampling is that there should be an awareness of the participants may answer what the hospital want them to answer if the interviews are conducted at the hospital. The participants could have been affected of the fact that both authors of this study and an interpreter was there during the interviews. The power imbalance can be increased by this situation and the answer could be socially acceptable, which could affect the dependability and credibility. On the other hand, the nonverbal communication as Polit and Beck (2017) underlined is important to remember, therefore, were there a benefit with both authors during the interviews. One could focus on the questions and the other on taking notes.

There are both benefits and disadvantages of performing the interviews during working hours, by having the interview at working hours the participants do not need to spend time at their spare time. On the other hand, the participants can be stressed to participate in the study. Polit and Beck (2017) explains that the researchers should choose interview location, Danielson (2017b) state that the researchers and the participants together should find an interview location to increase the participant confident. The interviews were in different place at the hospital, depending on the participants suggestions. Before conducting the interviews, the authors waited a day to get to know the environment which enhances the credibility (Mårtensson & Fridlund, 2017).

Henricson and Billhult (2017) emphasize the importance of variations in the selection of participants, which is a factor who increases the credibility of the selection and transferability of the study. There was no limitation with the participants’ years as a registered nurse, in order to be able to get as varied participants as possible. Majority of the participants were woman which can reduce the credibility because as Graneheim and Lundman (2004) state, various gender result in ample variation of the phenomena which increases the credibility.

This study was conducted at one hospital, which could impact on the study because the participants could have different experiences if the study was conducted at several hospital. On the other hand, the participants were working in different wards which gave different experiences of the phenomenon, a consideration is that the transferability increase by this.

In qualitative study interview is most common to collect data, an observation study is a great complementary and a part of qualitative study (Polit & Beck, 2017). Interviews were selected to get in-depth data from the participants’ clinical experience. Semi-structured interviews are a great option to collect data if specific topic is aimed to be studied (Polit & Beck, 2017). Polit and Beck (2017) describes that the researches have a structured role during the interviews, but not the participants, therefore, the topic guide was not handled out before the interviews. Also, encourage the participants to talk freely about the phenomena instead of having prepared answers. All the participants were asked the same questions but with different follow-questions, Graneheim and Lundman (2004) highlight the importance of asking the same main questions to increase the dependability.
Three participants declined to be audio-recorded during the interviews, which tends to reduce the credibility of the study. Polit and Beck (2017) explains that recording of the interview is advantageously and only interpretations from notes reduces the credibility because of incomplete notes. On the other hand, the reliability of the results in the recorded interviews are high (Polit & Beck, 2017).

There was an awareness of the language in the topic guide, Polit and Beck (2017) explain that the researchers and participants, in this study the interpreter also, should have similar vocabulary, and be accurate with using same medical terms or slang to avoid misunderstandings. A consciousness around knowledge of English has been taken in consideration during the written process. Therefore, support of a supervisor has been used to increase the academic English text and with difficult words a dictionary has been used. An insight about the interpreter’s knowledge of English and medical terms. By a supervisor credibility and confirmability could increase in accordance with Mårtensson and Fridlund (2017). Sometimes misunderstandings emerged during the interviews related to some of the questions, the misunderstanding has after the interview been solved by the authors explaining the question and the meaning of it with different words to the interpreter.

According to Al-Amer, Ramjan, Glew, Darwish and Salamonson (2014), misunderstandings can emerge during the translation. Expression, jargon or slang are some parts that can be missed during the transcription from the interpreter. On the other hand, the interpreter might have to amend sentence structure or grammatical errors from the interview language, from the translation. This is an issue if interviews are performed in one language and then present in another language (Al-Amer et al. 2014). A consideration is by having an interpreter the dependability and credibility could be reduced, this with reason that the authors did not conduct the interviews by them self. On the other hand, the authors transcribed the interview data which increases dependability (Mårtensson & Fridlund, 2017).

There are different types of analysis methods, a qualitative content analysis was selected because the most information-rich meaning emerge after condensing the collected data with help of this analysis method (Polit & Beck, 2017). An inductive approach of the analysis, conventional, has been used with the reason that the analysis was built on what the participants said and not by a theory, as in a directed content analysis (Danielson, 2017b). An awareness was established of the authors pre-understandings before the study was conducted (Danielson, 2017b), knowledge of the phenomenon has been obtained during internship in Sweden and theoretical education. By having an awareness of the pre-understanding, it increases the confirmability and dependability in the study (Danelson, 2017a). A consideration to be aware of is that there is no absolute truth, Graneheim and Lundman (2004) describe the reality as subjective during a qualitative study. It is of great importance to be aware of that subconsciously the pre-understanding can affect interpretations of the participants answers. The analyze of the interview data has led to the result and by presenting only what the participants talks about, the credibility can increase in accordance with Mårtenson and Fridlund (2017) which explains by having a valid result the credibility is increased.

The process of creating codes from meaning units were difficult, Graneheim and Lundman (2004) explains the problem with meaning units being too long or too short is that it can
reduce the credibility. A reflection of the study analysis is that there were sometimes short meaning units, which can lead to disruption and losing the meaning of the content. There were two authors in the study which enhances the credibility by analyzing individually and then concluding the findings together, the dependability increases by an open dialogue between the authors about equality and inequality of the content which were compatible over the analyzed process (Graneheim & Lundman, 2004). According to Mårtensson and Fridlund (2017) the credibility and confirmability has been increased after a supervisor and supervisory group have reviewed the result and analysis process.

After the analysis a reflection of the topic guide was made (Henricson, 2017), to evaluate if the questions answer the aim, the consideration was that some topics could have been developed. An example is how the participant experienced PUs affecting the person, which could increase the argument of PUs affecting the person. By describing each step in the data collection, characteristics of the participants, process of the analysis, powerful results and appropriate quotations increases the transferability (Graneheim & Lundman, 2004) and the confirmability is strengthened (Mårtenson & Fridlund, 2017).

Informed consent and the opportunity for the participants of at any time to withdraw their participate is a strength, as strategies of keeping the confidentiality of the participants (Kjellström, 2017). The participants participated voluntarily in the study, and the protection of the participants identity were in main consideration by keeping the confidentiality (Kjellström (2017) and not asking private question. The participants were stressed and had a limited time which is a risk because the participants are already depositing time to participate. On the other hand, the participants were open to share their knowledge which shows that the interest of participating was high. According to Mårtensson and Fridlund (2017) the confirmability enhances by confirming the decision that was decided. The city that the interviews were conducted is not mentioned, which could reduce the possibilities to perform the interviews in the same society, something affecting the transferability, on the other hand an ethical consideration is that the participants identify is protected. By this method the aim was responded.

**Conclusion**

The main finding in this study was that all participants described the importance of preventing pressure ulcers by their compliance to the hospital guidelines. The registered nurses experienced that the guidelines were an effective approach, as a guidance during nursing care. Pressure ulcers has negative consequences for the person and shows a lack of safety for the patient.

Registered nurses were aware of their professional responsibilities connected to pressure ulcers. It is necessary to be update with new evidence of pressure ulcers and evaluate which grade the person has developed to establish the preventing strategies. In order to work person-centered, registered nurses should involve the person when it comes to identify a pressure ulcer and different preventing strategies. This requires that the registered nurse have the ability to teach the person and their relatives how to prevent occurrence of new pressure ulcers.
**Further research**
The authors recommend a further research at different hospitals around Peru with similar aim could result a wider perspective of registered nurses preventing strategies, a suggestion is to expand the number of participants or/and more specific inclusions criteria. A reflection is that an observation study at the same hospital would complementary this study. The quality of this thesis would, by these suggestions, strengthened, which increase the transferable to major parts of Peru. Because of this bachelor thesis has restrictions, these suggestions were not possible to implement.

**Clinical relevance**
Clearly an awareness of having hospital guidelines is important, there the registered nurses having an important role following them. It emerged reduced occurrence of pressure ulcers after implemented of guidelines at the hospital. Further pressure ulcers created a lot of suffering and therefore, it is important during nursing education, obtain knowledge of preventing strategies and continue to develop the own knowledge all the time. As a registered nurse it is meaningful and a part of the responsibility to work with evidence. By this, pressure ulcers had been connected to the importance of working person-centered and registered nurses’ main responsibility of identify and prevent pressure ulcers.
REFERENCES


APPENDIX A

**Topic guide:**

- The aim for the bachelor thesis is to describe registered nurses’ experiences of preventing the occurrence of pressure ulcers in persons receiving care in a hospital in Peru
- This interview is confidentiality
- Is it okay that we record the interview so we can work with the material after?
- If you have any question about your participation, you can send us an email and you can at any time reject your participation without any consequences

**Background:**
- How long have you worked as a registered nurse?
- Which ward do you work at?

**Working environment:**
- Are there guidelines in your hospital/clinic for prevention and management of Pressure ulcer? Explain your experiences of working with these guidelines
- If a person has already developed a pressure ulcer what are your experiences of management and prevention of further pressure ulcers?

**Nursing:**
- What are your experiences of caring for persons with pressure ulcers?
- What are your experiences of working with persons to try and prevent the occurrence of pressure ulcers?
- How do you work with identifying persons at risk of developing pressure ulcers?
- Follow question: using any risk scales?
- How do you work person-centered?

**General:**
- How would you say that a registered nurse can work for developing their knowledge about pressure ulcer?
- How do you work for developing your role as a registered nurse’ in relation to assessment, prevention and management of pressure ulcer?
- Can you describe what you think your professional responsibility are as a registered nurse?

Thank you for participating in this interview. Is there anything that I have omitted to ask that you think is relevant to the research subject?
How did you experience this interview?
Dear xxx,
We are Ellinor Karpegård and Jennifer Svalstedt. We are at the end of our nursing studies and are going to carry through a bachelor’s degree study covering 15 university credits at Sophiahemmet University, Stockholm, Sweden. We are planning to visit Peru between April 1 to May 27, 2019, with the purpose of writing our bachelor thesis with the scholarship of Minor Field Studies program (MFS). The MFS program is a SIDA financed scholarship for students that are interested to spend eight weeks in a developing country to perform a minor study as a basis for a bachelor’s thesis.

The preliminary aim of the bachelor thesis is to describe registered nurses’ experiences of preventing the occurrence of pressure ulcers in persons receiving care in a hospital in Peru.

The study will consist of semi structured interviews with open ended questions. We are therefore interested in conducting interviews with six-nine registered nurses chosen based on the following criteria; to be a registered nurse and speak Spanish or English. Estimated time for the interviews will be around 20 minutes and the interviews will be held in the space of the hospital. The interviews will then be transcribed and compiled. If the registered nurses give permission the interview will be recorded by an audio recorder. This is done to ensure that the data is transcribed correctly. Participation is voluntary, and the participant can at any time withdraw from the interview and study without any need for explanation.

Confidentiality and anonymity of the participants will be maintained throughout the study, meaning that no unauthorized will have access to the interviews and other information regarding the study. The confidentiality of the participants will be kept by not using the participants real names, they will be replaced by numbers or pseudonyms. A written consent will be submitted at the time of the interview. We are also planning to use an interpreter when we carry out the interviews, therefore, it is not required that the registered nurses speak English. The questions we are planning to ask are as follows;

**Preliminary interview questions:**
What are your experiences of caring for persons with pressure ulcers?
How do you work with identifying persons at risk of developing pressure ulcers?
How would you say that a registered nurse can work for developing their knowledge about pressure ulcer?
If a person has already developed a pressure ulcer what are your experiences of management and prevention of further pressure ulcers?

Travel, accommodation and other expenses for the field study will be borne by Ellinor Karpegård and Jennifer Svalstedt. Please find a certificate, attached with this mail, from our supervisor Margareta Westerbotn, that confirms that we are student at Sophiahemmet university.

Our hope is that you will be giving us the opportunity to carry out our study at your hospital and are awaiting your response.

Best regards
Ellinor Karpegård and Jennifer Svalstedt
APPENDIX C

To the director of *

During our studies at the nursing program at Sophiahemmet University in Stockholm, Sweden we will perform a bachelor thesis in Peru April 12th to April 18th. The aim for the bachelor thesis is to describe registered nurses’ experiences of preventing the occurrence of pressure ulcers in persons receiving care in a hospital in Peru.

Therefore, we are interested to perform interviews with registered nurses at your health center. If you approve that we conduct the interviews at your health clinic, we are grateful for your signature of this document. If you feel hesitant to us performing interviews at your health center, please also inform us about this. If you have further questions regarding our bachelor thesis, please contact our supervisor or us.

Kind Regards

_____________________________________
Ellinor Karpegård +46 70xxxxxxx ellinor.karpegard@stud.shh.se

_____________________________________
Jennifer Svalstedt +46 72xxxxxxx jennifer.svalstedt@stud.shh.se

Supervisor
Marie Tyrrell
marie.tyrrell@shh.se

I hereby approve that Ellinor Karpegård and Jennifer Svalstedt can perform interviews at * during April 2019.

__________________________
Place and Date

__________________________
Signature, Director

__________________________
Name
To the registered nurse,

During our studies at the nursing program at Sophiahemmet University in Stockholm, Sweden we will perform a bachelor thesis in Peru April 12\textsuperscript{nd} to April 18\textsuperscript{th}. The aim for the bachelor thesis is to describe registered nurses’ experiences of preventing the occurrence of pressure ulcers in persons receiving care in a hospital in Peru.

I hereby confirm that I have read the information above and that I would like to participate in the bachelor thesis.

_____________________________________
Place and Date

_____________________________________
Signature, Registered Nurse

_____________________________________
Name
APPENDIX E

To the interpreter,

During our studies at the nursing program at Sophiahemmet University in Stockholm, Sweden we will perform a bachelor thesis in Peru April 12th to April 18th. The aim for the bachelor thesis is to describe registered nurses’ experiences of prevent pressure ulcers at a hospital in Peru

When interviews are supposed to be done in a study is it important that the participants cannot be identified by people that read the study, this is called confidentiality. If you approve that the information during the interviews will be confidential, we are grateful for your signature of this document.

I hereby promise to keep the information confidential that come up at the interviews which will be held by Ellinor Karpegård and Jennifer Svalstedt at *

__________________________________________
Place and Date

__________________________________________
Signature, Interpreter

__________________________________________
Name