

**PRE-SHIFT ANXIETY AND ITS FACTORS INFLUENCING  
AMONG NURSING STUDENTS DURING CLINICAL  
PLACEMENT IN UNIVERSITI SAINS MALAYSIA  
HEALTH CAMPUS**

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**ABSTRAK**

Istilah kegelisahan pra-shift dapat dicari dengan mudah dari laman web, kegelisahan seperti ini sebenarnya wujud pada abad ini. Anehnya, belum ada penyelidikan yang dilakukan mengenai masalah atau isu ini. Keresahan pra-shift adalah kegelisahan antisipatif yang digunakan untuk menggambarkan pelajar sains kesihatan atau profesional sains kesihatan yang mengalami gejala kegelisahan sebelum memulakan shift mereka pada hari tersebut. Kebimbangan sebelum shift boleh menyebabkan pelajar sains kesihatan atau profesional sains kesihatan merasa cemas dan panik sebelum memulakan kerja mereka dan akhirnya mempengaruhi prestasi mereka secara negatif. Dalam senario kes yang lebih teruk, ini seterusnya boleh memberi kesan negatif terhadap hasil perawatan pesakit. Tidak dapat dinafikan, kegelisahan sebelum pergeseran adalah masalah berulang dalam bidang sains kesihatan tetapi masalah ini belum diberi perhatian yang cukup oleh pihak berkuasa. Oleh itu, kajian ini bertujuan untuk menentukan tahap kegelisahan sebelum pergeseran dan faktor-faktornya yang mempengaruhi (keyakinan diri dan rasa kekitaan) di kalangan pelajar kejururawatan semasa penempatan klinikal di Kampus Kesihatan Universiti Sains Malaysia. Seramai 135 pelajar kejururawatan Universiti Sains Malaysia telah mengambil bahagian dalam kajian ini dengan menjawab soal selidik yang

dikendalikan sendiri melalui Google Form yang dihantar kepada mereka. Data yang dikumpulkan dianalisis melalui SPSS versi 26.0. Ciri-ciri sosiodemografi, tahap kegelisahan sebelum pergeseran dan tahap keyakinan diri dan rasa kekitaan disajikan dalam statistik deskriptif. Selain itu, hubungan antara ciri sosiodemografi, keyakinan diri, dan rasa kekitaan dengan kegelisahan sebelum pergeseran dianalisis oleh ujian Pearson's Chi Square dan Independent T Test. Dijangkakan, kebanyakan pelajar kejururawatan di Kampus Kesihatan Universiti Sains Malaysia mengalami tahap kegelisahan sebelum shift yang tinggi. Walau bagaimanapun, keyakinan diri dan rasa kekitaan bukanlah faktor utama yang mempengaruhi pelajar untuk mengalami kegelisahan sebelum shift. Walaupun begitu, penemuan kajian ini memberikan gambaran kepada pihak berkuasa sains kesihatan atau faculty sains kesihatan universiti mengenai masalah kegelisahan sebelum peralihan di kalangan pelajar sains kesihatan dan profesional sains kesihatan. Oleh itu, tindakan atau strategi yang sesuai harus diambil untuk menyelesaikan masalah ini dan mengurangi kegelisahan sebelum pergeseran dalam pengaturan sains kesihatan sehingga hasil rawatan pesakit dapat ditingkatkan, dan perawatan yang berkualiti dapat disampaikan.

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**ABSTRACT**

The term pre-shift anxiety can be easily searched from website or webpage, this simply means that this kind of anxiety is existed in this century. Surprisingly, there has been no research done regarding this issue. Pre-shift anxiety is an anticipatory anxiety that is used to describe healthcare students or healthcare professionals experiencing anxiety symptoms right before starting their shift in the day. Pre-shift anxiety can cause the healthcare students or healthcare professionals to feel anxious and panic right before starting their work and eventually negatively affect their performance. In a worse-case scenario, this can in turn negatively affect the patient care and patient outcomes. Undeniably, pre-shift anxiety is a recurring problem in healthcare but sadly this issue has not been paid enough attention by the authorities. Therefore, this study aims to determine the level of pre-shift anxiety and its factors influencing (self-confidence and sense of belonging) among the nursing students during clinical placement in Universiti Sains Malaysia Health Campus. A total of 135 nursing students of Universiti Sains Malaysia participated in this study by answering self-administered questionnaire through Google Form sent to them. The collected data was analyzed through SPSS version 26.0. Sociodemographic characteristics, the level of pre-shift anxiety and the level of self-confidence and sense of belongingness were presented in descriptive statistics. Besides,

the association between sociodemographic characteristics, self-confidence, and sense of belongingness with pre-shift anxiety was analyzed by Pearson's Chi Square and Independent T test. Expectedly, most of the nursing students in Universiti Sains Malaysia Health Campus are experiencing high level of pre-shift anxiety. However, self-confidence and sense of belongingness are not the main factors that influence the students to have pre-shift anxiety. Nevertheless, the findings of this study provide insight for the healthcare authorities or healthcare schools regarding the issues of pre-shift anxiety among healthcare students and healthcare professionals. Therefore, appropriate action or strategies should be taken to solve this issue and reduce pre-shift anxiety in healthcare settings so that patient outcomes can be improved, and quality care can be delivered.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

This dissertation aimed to assess pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus. This chapter will discuss the background of the study, followed by the problem statement, research questions and objectives, hypothesis of the study, significance of the study and eventually the operational definition of the key terms used in this study.

### 1.2 Background of Study

Pre-shift anxiety is a type of anticipatory anxiety that is specifically used in medical field especially for nursing, which means nurses experience anxiety symptoms right before starting their shifts in the day (Morries, 2022). Shely (2021) stated that about 60% to 80% of the nurses regularly experience pre-shift anxiety where they suffered intense stress, emotional burnout, fear, severe anxiety, panic attack and physical burnout before the shift in hospital.

Pre-shift anxiety can cause the nurses to have anxious thought and make them difficult to start their work in a day or may be eventually affecting their self-confidence, mental status and quality of life especially in terms of sleeping (Explore Insiders, 2022). As we can see, this will negatively affect the performance of the nurses or the student nurses in their clinical work or clinical practice. When the work performance of the nurses is affected, undoubtedly it may also affect patient's outcomes. Therefore, without a doubt,

pre-shift anxiety is a recurring problem in healthcare settings where it will negatively affect the quality of life of both the nurse and patient.

In particular, this proposed research aims to investigate the pre-shift anxiety that occurs among the nursing students during clinical placement in Universiti Sains Malaysia Health Campus. Besides, there is also a need to identify the factors influencing the pre-shift anxiety among nursing students which includes with the socio-demographic characteristics, self-confidence and sense of belongingness among nursing students during clinical placement. Indeed, there is a need to determine the level of pre-shift anxiety among nursing students during clinical placement because knowing the level of pre-shift anxiety can help the community to offer some alternatives to this issue. In order to offer solutions to this problem, research on this pre-shift anxiety and its causes needs to be done among nursing students before they are graduating and becoming a registered nurse. This is the first step in addressing the problem.

According to the experiences from the researcher as a nursing student in Universiti Sains Malaysia Health Campus, there are indeed nursing students do experience some form of anxiety during clinical placement. According to the interview with other colleagues, they also agreed that pre-shift anxiety is one of the types of anxiety experienced by the nursing students during clinical placement. However, there is no research done regarding this issue no matter in Malaysia or other countries. There is little known about nursing students' experiences or anxiousness during their clinical placement across their entire programs.

A study conducted by Simpson & Sawatzky (2020) found out that there are huge potential harms associated with clinical placement anxiety and it is important to effectively prevent anxiety in clinical placement students. Though there is little literature

briefly discuss on clinical placement anxiety among nursing students, pre-shift anxiety is still totally being neglected. In fact, pre-shift anxiety is part of the clinical placement anxiety where it is specifically described the anxiety experience right before having the shift.

With this initial knowledge in mind, a few initial interviews with some of the nursing students are conducted. As a result, some students complained that they have no motivation to go to the shift due to the fear and anxious symptoms that take control of their mind and body. They explained that pre-shift anxiety actually causes them to have no confidence during the shift and eventually under-performed or made mistakes. They also claimed that there is no lecturer or clinical instructor looking into this issue and make them feel even more burden. With this, these are indeed the concrete proofs that there are some nursing students are having pre-shift anxiety during clinical placement in Universiti Sains Malaysia. Interestingly, there are no research done regarding this issue.

Nevertheless, a few initial interviews with some other different courses students of Universiti Sains Malaysia Health Campus have been carried out as well. According to the interview, researcher noticed that health sciences programme like Nutrition, Biomedical Science, Dietetics are only required to go for industry training or internship instead of running on shift in clinical setting. Most of them verbalized that they did feel anxious before the start of internship period, but the feeling faded as they started the internship. On the other hand, the respondents from other programme like medical and dentistry verbalized persistent anxiety experienced for almost every shift during their placement in hospital.

To further validate the information gathered from this initial interviews, other round of interview has also been conducted with the nursing students from other university in

Malaysia. Regarding the interviews, it is obvious that the nursing students from other universities also felt uneasy the day before or right before having the shift. The students also claimed being interrupted much by own pre-shift anxiety. They complaint that this pre-shift anxiety has caused them to feel nervous and fear during shift and eventually causing more problems due to trembling of hands and dizziness.

According to Cirino (2018), there are few symptoms can be experienced during anxiety which includes pre-occupying and intense sensations, difficulty in self-attention, change in mood and memory, rapid heart rate, rapid breathing dizziness, headaches, hand tremors, heavy sweating, muscle tension and chest tightness. As for Simpson & Sawatzky (2020), clinical placement anxiety is identified as “vague perceived threat, psychological emotional responses and psychological-cognitive response, as well as, physiological responses, and the presence of an unfamiliar environment and situation”

Given the above discussion, it is evident that there are indeed nursing students in Universiti Sains Malaysia Health Campus who are experiencing pre-shift anxiety. As we can see, pre-shift anxiety is a specific type of anxiety in nurses by which it not only affects the students in terms of emotional, physiological and physical, instead it also affects student nurses' performance and patient's quality of life (Morris, 2022; Stephen, 2022). Again, it is for this reason that research on pre-shift anxiety among nursing students needs to be done in order for the nursing faculty to pay attention and look through this issue as well as coming up with some appropriate action or solution.



### **1.3 Problem Statement**

Anxiety is the major obstacle among nursing students in the learning process where they may be unable to perform in the clinical setting. Studies illustrated that most nursing students will tend to become anxious and stress due to the fear of making wrong decisions, inability to put clinical theory into practice, poor communication, lack of confidence in performing clinical skills and unfamiliar clinical placement environment (Moscaritolo, 2009; Pulido-Martos et al., 2012; Wu et al., 2021). In spite of this, clinical placement is still an integral and essential part in nursing education where students could gain the real experiences and values of being a nurse through the clinical learning experience.

A few causes of the anxiety experienced by the nursing students such as experiencing stressful relationship with the staff during clinical placement (Gorostidi et al., 2007). This can happen when the staff nurses distance themselves from the nursing students or even saying that the students are a nuisance. This may eventually cause the nursing students to feel unappreciated and excluded from the team (Evans & Kelly, 2004). This can also cause the students to have pre-shift anxiety before going to clinical placement and eventually reluctantly attend the clinical practice.

There are few literatures regarding clinical placement anxiety but there is no reliable literature found regarding pre-shift anxiety among nursing students no matter in Malaysia or other countries. However, pre-shift anxiety is indeed an important issue to be discussed as it affects the nursing students as much as the clinical placement anxiety. This issue not only affects the students themselves in terms of academic performance but also can harm patients in the worst case. With this, it is important for us to conduct this study to investigate the pre-shift anxiety among nursing students.

## **1.4 Research Questions**

The research questions of this study are as follow:

- 1) What is the level of pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus?
- 2) Is there association between self-confidence and sense of belongingness factors with pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus?
- 3) Is there association between socio-demographic characteristics with pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus?

## **1.5 Research Objectives**

**1.5.1 General Objectives:** To determine the pre-shift anxiety and its factors influencing among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

### **1.5.2 Specific Objectives:**

- 1) To determine the level of pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.
- 2) To determine the association between self-confidence and sense of belongingness factors with pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

- 3) To determine the association between socio-demographic characteristics and pre- shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

## **1.6 Research Hypothesis**

### **Hypothesis 1:**

**H<sub>0</sub>:** There is no association between self-confidence level and pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

**H<sub>A</sub>:** There is association between self-confidence and pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

### **Hypothesis 2:**

**H<sub>0</sub>:** There is no association sense of belongingness and pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

**H<sub>A</sub>:** There is association between sense of belongingness and pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

### **Hypothesis 3:**

**H<sub>0</sub>:** There is no association between socio-demographic characteristics (age, gender, types of nursing programme, year of study, year of clinical experiences) and pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

**H<sub>A</sub>:** There is association between socio-demographic characteristics (age, gender, types of nursing programme, year of study, year of clinical experiences) and pre-shift anxiety

among nursing students during clinical placement in Universiti Sains Malaysia Health Campus.

### 1.7 Conceptual and Operational Definition

The operational terms used in this research proposal are shown below in Table 1.1:

*Table 1. 1 Conceptual and Operational Definition*

<b>TEMRS</b>	<b>Conceptual Definition</b>	<b>Operational Definition</b>
Pre-Shift Anxiety	Pre-shift anxiety is generally a type of anticipatory anxiety that happening among healthcare workers especially the nurses, in the lead-up or right before to their shifts (Shely, 2021b). Anxiety is defined generally as “apprehensive, uneasiness or nervousness usually over an impending or anticipated ill” (Merriam-Webster’s dictionary, 2019a, para. 1)	Pre-shift anxiety in this study refers to the anxiety experience prior to shift during their clinical placement that will be measured using Spielberger’s State-Trait AnxietyInventory (STAI).
Self-Confidence	Self-confidence is also defined as “a belief that one is capable of successfully meeting the demands of a task” (American Psychological Association, 2022, para. 2)	Self-confidence in this study refers to the belief of the nursing students on their ability in performing task during clinical placement and will be measured by using

		General Self- Efficacy (GSE) scale.
Sense of Belongingness	Sense of belongingness is defined as “a psychological feeling of connectedness in society, cultures and professional” (Raman, 2014, para. 3).	Sense of belongingness in this study refers to the feeling of belonging or connectedness with the colleagues and staffs in the hospital during the clinical placement among the nursing students and will be measured using Need To Belong (NTB) scale.
Clinical Placement	Clinical placement is defined as “any clinical rotations, internships, residencies, fellowships, and any other training experience that a student undergoes as part of their health professions program” (Law Insider, 2021).	Clinical placement in this study refers to the clinical practice training or clinical rotation among the nursing students as their part of nursing programme.
Nursing Student	Nursing is “an integral part of the health care system, encompasses the promotion of health, prevention of illness, and care of physically ill, mentally ill, and disabled people of all	Nursing students refer to the respondent that participate in this study at school of Health Sciences in Universiti Sains Malaysia.

	ages, in all health care and other community settings” (International Council of Nurses, 2002).	
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### **1.8 Significant of the Study**

The findings from this study will address the level of pre-shift anxiety and its factors influencing among the nursing students during clinical placement in Universiti Sains Malaysia Health Campus, specifically on factors of self-confidence, sense of belongingness and socio-demographic characteristics.

This could help intervene solutions and strategies in reducing or preventing pre-shift anxiety among nursing students or nurses as well as enhancing their self-confidence. This prevention of pre-shift anxiety and encouragement of self-confidence could not only improve nurses’ quality of life but also patient’s outcome.

As mentioned earlier, there are exactly no research done on pre-shift anxiety among nursing students or nurses in neither Malaysia nor other country. Even though the term “pre-shift anxiety” is very common in healthcare field healthcare, surprisingly there is no previous study done regarding this issue.

It is believed that this research can really provide insights and strong evidence for nursing schools around the world. Nursing educators could then put some efforts into preventing this issue among the students by providing more and quality simulation sessions. It can also help the nursing society to come up with solutions in reducing pre-shift anxiety stress among the registered nurses. This can directly and indirectly improve the quality of life of the nurses as well as patient’s outcomes.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter provides a general review of the literature about pre-shift anxiety, self-confidence, sense of belongingness and clinical placement. The final section of this chapter will describe the theoretical and conceptual framework used in this study.

#### **2.2 Pre-Shift Anxiety**

Anxiety is defined generally as “apprehensive, uneasiness or nervousness usually an impending or anticipated ill” (Merriam-Webster’s dictionary, 2019a, para. 1). In Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) defines anxiety as “a normal human experience of fear in the face of a future or imminent threat” (APA, 2013). According to Shely (2021), pre-shift anxiety is generally a type of anticipatory anxiety that happening among healthcare workers in the lead-up or right before to their shifts. Shely (2021) also stated that pre-shift anxiety is a specific term used in nursing that explained the stress experienced by nurses before shifts by having anxiety symptoms like fear, panic attack or burnout right before starting the shift of the day.

Since nursing is a high demanding healthcare profession, the nursing undergraduate students begin to have a high level of stress and anxiety even during nursing school which involved both didactic and clinical coursework simultaneously (Turner & McCarthy, 2017). The anxiety and stress experienced by the nursing students with other healthcare-related courses students are different as other courses would only introduce clinical practice session by the time of graduating or after the graduation (Crary2013). Crary (2013) emphasised that the student nurses are required to deal with

both theory course works and clinical practice simultaneously during the whole nursing programmes. These high workloads eventually can be a stressor as well as leading to anxiety in nursing students. According to Moscaritolo (2009), the early introduction of the learning environment in clinical or hospital settings can bring stress and anxiety to the students and eventually affecting their clinical performance during undergraduate studies.

In order to prepare the nursing students to use and practice the theories learnt in nursing programme into real life situation, all the student nurses are required to go through the continuous clinical placement during the four years of studies (Admi, 1997a). Admi (1997) emphasized that adequate clinical practices could train the nursing students to develop strong and effective critical thinking skills in problem solving as they gathered more insights through clinical experiences. However, literature has identified that this real clinical practice on real patients brings about more stress and anxiety than didactic courses among the nursing students (Mohamed Sanad, 2019).

Nursing students tend to put on their focus more own personal insufficiencies instead of gaining clinical experience when exposed to different clinical settings as they are afraid and feeling incompetent during clinical placement (Benner et al., 2009). Benner et al. (2009) stated that this clinical placement anxiety may result in incapacitating anxiety. Incapacitating anxiety among nursing students can further lead to other impacts to both students and patients as well. With this, this study is important to identify the pre-shift anxiety issue among nursing students during their clinical placement.



## **2.2 Clinical Placement in Nursing Education**

Clinical placement is defined as “any clinical rotations, internships, residencies, fellowships, and any other training experience that a student undergoes as part of their health professions program” (Law Insider, 2021, para. 1). Nursing clinical placement is the clinical practicum for nursing students to demonstrate their academic practice into training in a clinical environment in order to increase student awareness and gain experiences of the specified areas (University of New England, 2022).

According to Levett-Jones & Bourgeois (2015), clinical placement is a central element or core in nursing education. Clinical placement in nursing provides a learning clinical environment for the students to develop nursing skills, critical thinking skills, decision making skills, knowledge, attitudes, behaviours, and a value of being a registered nurse by which all of these cannot realistically learn from classroom or simulation (Levett-Jones et al., 2006). Clinical placement is the time when undergraduate nursing students are being exposed to the reality of nursing field (Henderson et al., 2012).

Nursing clinical placement promotes the development of the competencies required in performing nursing tasks effectively during this transition period from theory to practice (Henderson et al., 2012). Nursing students is prepared to become a registered nurse with professional confidence through the clinical placement experience. The quality of the placement gives impacts on the growth of the professionalism of a nursing student (Cowin et al., 2008; McKenna et al., 2019)

However, Australian Nursing & Midwifery Accreditation Council proved that there are many nursing students especially Year 1 nursing students decided to withdraw from nursing degree after their first clinical experienced (Australian Nursing & Midwifery Accreditation Council, 2018). Dropout from nursing education can direct and indirectly

lead to global issues like severe nursing shortage as well as healthcare workers overworking (Bakker et al., 2019).

## **2.3 Factors Influencing Pre-Shift Anxiety**

### **2.3.1 Self-Confidence**

Self-confidence is defined as “the confidence in oneself and in one’s powers and abilities (Merriam-Webster’s dictionary, 2019b, para. 1). According to APA dictionary of psychology, self-confidence is also defined as “a belief that one is capable of successfully meeting the demands of a task (American Psychological Association, 2022, para. 2).

Self-confidence can affect one’s decision-making process as well as reflecting one’s social abilities, social experience, and knowledge (Dong et al., 2019). Dong et al., (2019) also discussed that the decision making can be done in two ways which is either decision-making with completely confidence or lack confidence decision making. Self-confidence is crucial in developing decision making especially in clinical setting and is known as clinical decision making (CDM) in specific (Owens & Keller, 2018).

In terms of nursing, the building and strengthening of self-confidence is the key factors for the nursing students to handle the simulation or real clinical situation during clinical placement in order to provide accurate, safe, and high-quality patient care (Guerrero et al., 2022). Guerrero and the team (2022) also stated that having sufficient self-confidence is very crucial in both professional nurses and student nurses. Self-confidence is not just a clinical skill that developed from clinical learning space and clinical practice environment, instead it is more to an outcome from a complex program of study that applying theory into practices (Henderson et al., 2012). Results from

research also show that there is an association between student's level of confidence and performance tasks whereby students with low self-confidence tend to under-performed and even hesitant to participate in activities (Moneva & Tribunalo, 2020).

There are some studies that reported that nursing students have a higher level of self-confidence at the beginning of nursing programme where clinical placement has yet to start. This self-confidence becomes less with the next subsequent year of studies (Edwards et al., 2010; Randle, 2003).

The research done by Kukululu et al., (2013) has reported that the fourth year of nursing students showed the lowest level of self-confidence in their study. According to the study as well, the second-year nursing students showed a higher self-confidence than the third-year nursing students. It also shows that the nursing students with younger age has a higher self-confidence level compared to elder age nursing students in this study (Kukululu et al., 2013)

The research done by Kukululu et al., (2013) has reported that male nursing students have a higher self-confidence level than female nursing students. However, research done by Karagözoğlu et al., (2008) showed a different result where female nursing students have higher self-confidence compared to male nursing students.

### **2.3.2 Sense of Belongingness**

Belongingness is an important element in clinical learning experiences among nursing students (Levett-Jones & Lathlean, 2008). People always tend to seek belongingness in the workplace through pleasant working relationships with colleagues (Maslow, 2000). A good working relationship can help the worker to feel being connected

and integrated into the work community and thereby experiencing enough sense of belongingness (Ryan & Deci, 2000).

As in nursing, a sense of belongingness in the working environment is difficult to achieve due to the involvement of different professional teams. Same goes to the nursing students as well, the relationship with the staff nurses can affect their feeling of belongingness (Levett-Jones & Lathlean, 2009). Nursing students get stressed out, worried and anxious when there is no sense of belongingness (Bergsieker et al., 2010). Students who are deprived of belongingness are more prone to experience increased anxiety and stress, depression, and diminished self-esteem (Levett-Jones et al., 2009a). According to Levett-Jones et al., (2009), the sense of belongingness among nursing students during clinical placement is influenced by the staff-student relationships.

According to Maslow (1943), the concept of belongingness is one of an important element that contributed to human motivation and has been inserted into the development of human Hierarchy of Needs. Feeling a sense of belongingness during clinical placement can contribute to positive outcomes like increased satisfaction and decreased anxiety (Levett-Jones & Lathlean, 2009).

### **2.3.3 Sociodemographic Characteristics**

Socio-demographic characteristics have been a predictor factors influencing the pre-shift anxiety happens in nursing. In this study, socio-demographic characteristics such as age, gender, year of study, year of clinical experiences and area of clinical placement will be used to study for the pre-shift anxiety among nursing students during clinical placement. The majority students that enrolled in nursing programme is majority in female and leading to female having high risk of getting anxiety if compared to male

(Alshahrani et al., 2018). Alshahrani et al. (2018) also stated that most of the nursing students who suffer from anxiety or clinical placement anxiety is the first-year students with their first year of clinical placement experience.

Students enrolled in undergraduate nursing programs often experience high levels of stress and anxiety as the program of study is competent and tiring (Chernomas & Shapiro, 2013). Nursing students reported an increase in anxiety level during their earlier clinical placement which is during their first and second year of study (Moscaritolo, 2009).

Study also shows that nursing students or nurses working in intensive care unit (ICU) tend to experience higher level of anxiety if compared to other area of clinical placement (Acar Sevinc et al., 2022; Mealer et al., 2007). There are also few studies that show that the nurses working in intensive critical care unit (ICU) have the higher prevalence of anxiety and burnout (Chuang et al., 2016; Vermeir et al., 2018).

There are few reviews that showed that the nursing students struggle, anxious and stress out more in the first few months and the very first year of the clinical experience (Inayat et al., 2021; Järvinen et al., 2018). But over the years of clinical experiences, the nursing students can better handle the stressful situation thus with less anxiety (Younas et al., 2019).

## 2.4 Theoretical and Conceptual Framework

The intolerance of uncertainty (IU) model as shown in Figure 2.1 can be used to further explain the anxiety among nursing students. This model is one of the theoretical frameworks that is used in studying the Generalized Anxiety Disorder (Bottesi et al., 2016). The intolerance of uncertainty model points out that the individuals with high IU will experience anxiousness in a situation that is uncertain. They may feel threatening regardless of the actual probability for the negative event to occur (Dugas et al., 1998).

According to this model, an unfamiliar and uncertain situation will act as a trigger for the individual to get anxious for the future upcoming event there. Instead, worrying becomes the main issue. This negative uncertainty mindset will influence the individual's ability in dealing with the situation which is either ended up with negative problem orientation or cognitive avoidance.

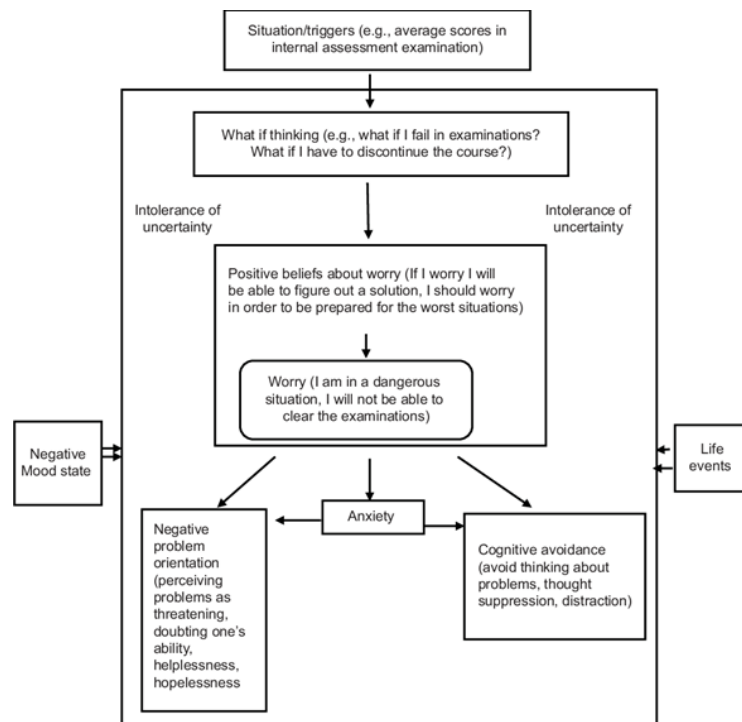


Figure 2. 1 Intolerance of Uncertainty Model

The intolerance of uncertainty model has been widely used in research related

anxiety. Thus, this intolerance of uncertainty model was adapted in this study to further explore the pre-shift anxiety among the nursing students during clinical placement in Universiti Sains Malaysia Health Campus. This study was intended to explore the nature of pre-shift anxiety among the nursing students related to the specific factors such as socio-demographic characteristics, self-confidence level and sense of belongingness during clinical placement.

According to the conceptual framework for this study that are adapted from the Intolerance of Uncertainty model, the self-confidence level, sense of belongingness acts as the factors influencing that substituting the ‘negative mood state’ from the original framework. The sociodemographic characteristics, especially the types of nursing programme, years of study and years of clinical experiences are the life events that affecting the anxiety level.

When the nursing students are triggered by the upcoming stressful condition during their shift, they might start developing many uncertainties. This uncertainty will make you worried and producing many “what if” thoughts. These thoughts can produce more uncertainties until the students are intolerant to it. The intolerance of uncertainties can then increase the anxiety level right before they going to their shift.

The outcomes of negative problem and cognitive avoidance that are from the original framework are excluded from the conceptual framework in this study. This is because this study is mainly focusing on the pre-shift anxiety level and its factors influencing instead of the outcomes of anxiety. Thus, only the upper part of the original framework that is above the dotted line is adapted as shown in Figure 2.2 below.

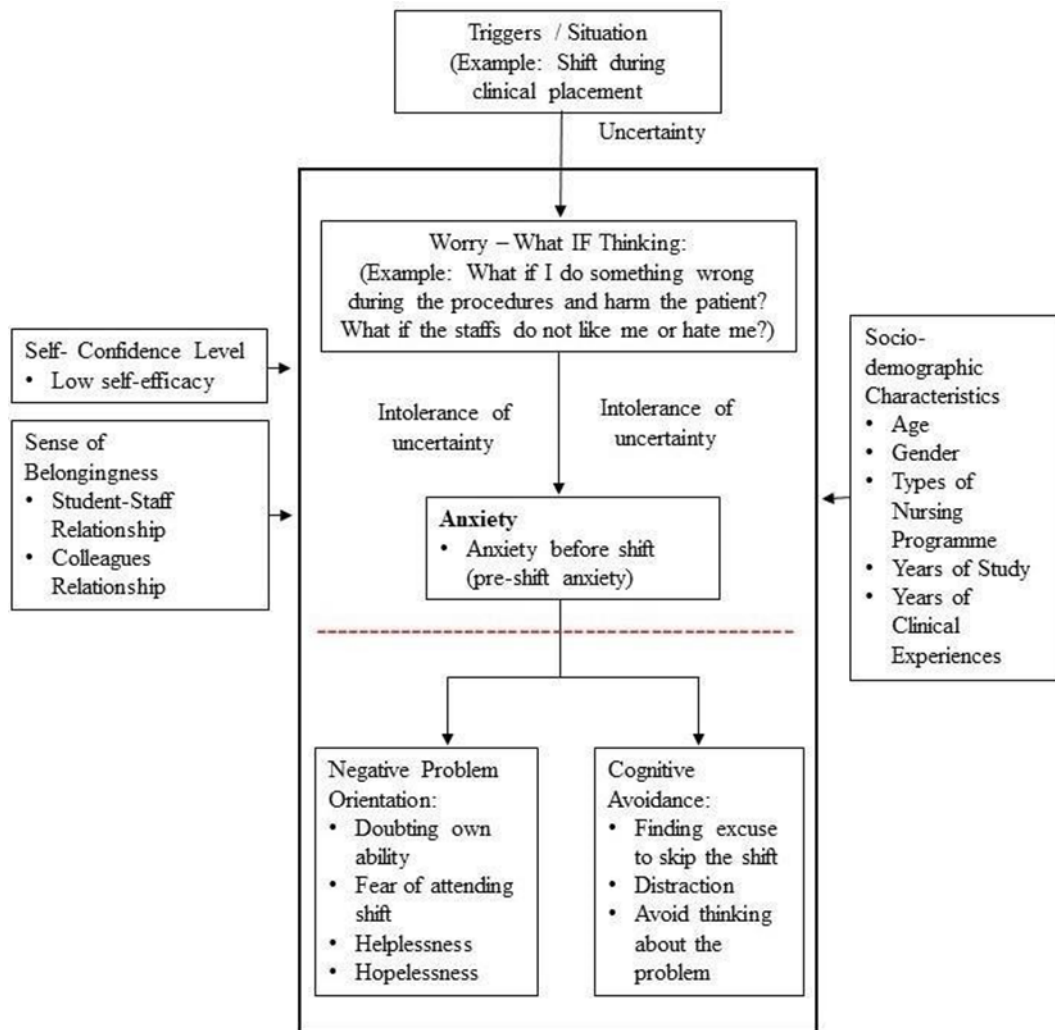


Figure 2. 2 Conceptual Framework of Study. Adapted from the Intolerance of Uncertainty Model



## **CHAPTER 3**

### **METHODOLOGY AND METHODS**

#### **3.1 Introduction**

This chapter will explain the approach and rationales used to support the chosen research methodology of this study. Determining and understanding a suitable research design is very important in achieving the purpose of the study. Firstly, the chapter will begin with the description and explanation on the cross-sectional design as well as the justification of using this approach. The section will be followed by a description of the study setting, population, selection criteria, sampling plan, sample size estimation, instrumentation used and ethical consideration while collecting the data. The final section will be explaining the analytical processes used with the quantitative data.

#### **3.2 Research Design**

Research design is a strategy or plan used by the researcher to explain the way of conducting the research by the description of data collection method and data analysing (McCombes, 2021). A cross-sectional study design was utilized in this research project. The rationale of choosing this study design is where it allows the researcher to examine different variables at the same time on a whole study population. Besides, the researcher can also measure both the exposures and the outcome in the study participants at the same time in cross-sectional study design.

### **3.3 Research Location**

The study setting was located at the Universiti Sains Malaysia (USM) Health Campus in Kubang Kerian, Kelantan. There are three main schools in the health campus of USM which includes Pusat Pengajian Sains Kesihatan (PPSK), Pusat Pengajian Sains Perubatan (PPSP) and Pusat Pengajian Sains Pergigian (PPSG). Nursing is one of the courses offered by PPSK.

### **3.4 Research Duration**

For this study, the research duration was six months after obtaining approval from the Human Ethics Committee of USM, which is from January to June of year 2023.

### **3.5 Research Population**

The target population of this study is the nursing students of Universiti Sains Malaysia Health Campus that has undergone clinical placement in Hospital USM. The nursing student in USM Health Campus is either the undergraduate students or the diploma students. Undergraduate nursing is a 4-year course while Diploma nursing is a 3-year programme. Both undergraduate and diploma nursing students are required to go through clinical placement in Hospital USM at the end of the first year of study.

With this, this study will be involving Year 2 to Year 4 Degree nursing students and Year 2 to Year 3 Diploma nursing students with expected total number of 208 nursing students in Universiti Sains Malaysia Health Campus.

### **3.6 Subject Criteria**

To achieve the research objectives, several criteria are set to make sure the subject's data are appropriate for the research purposes so that targeted goals can be achieved.

#### **3.6.1 Inclusion Criteria**

The specific eligibility requirements for inclusion in this study required that each participant must be:

- Diploma and Degree nursing student who is studying more than 1 year
- Nursing students that have experienced clinical practice in Hospital USM

#### **3.6.2 Exclusion Criteria**

Subjects are excluded from this study if they are:

- Nursing students that have been diagnosed with anxiety disorder by psychiatrist.

### **3.7 Sampling Plan**

Sampling means the selection of the group of people as the representatives of the population and collecting the data from them (McCombes, 2019). A sampling plan is a statistical method to determine the measurements that will be taken on where, how, what and by whom.

#### **3.7.1 Sampling Method**

This study was using simple random sampling where respondents will have an equal chance of being selected from the population (McCombes, 2019). With this, a list of names of nursing students from Degree and Diploma were obtained after getting the

approval from ethical committee and deans of PPSK.

The name list required for Diploma Nursing is from year 2 to year 3 while only name list from year 2 to year 4 is only needed for Degree Nursing. This is because that year 1 nursing students that have less, or no clinical experience are not fulfilling the inclusion criteria of this study.

After getting the name list of the nursing students, the list was sorted according to year of study for each programme and each student was given a unique number, online randomizer tool was used to generate list of random number. The selected sample based on random number were invited to participate in this study.

### 3.7.2 Sample Size Estimation

The sample size for the **first objective** (to determine the level of pre-shift anxiety among nursing students during clinical placement in Universiti Sains Malaysia Health Campus) was determined using single proportion formula. The anticipated proportion of this study was 9.7%, according to similar survey conducted in University of Bahrain (Mohamed Sanad, 2019).

$$n = \left(\frac{Z}{\Delta}\right)^2 p (1 - p)$$

Whereby,  $n$  = required sample size

$v$  = value representing the desired confidence level,  $Z_{0.05} = 1.96$

$\Delta$  = desired level of precision,  $\pm 5\%$

$p$  = anticipated population proportion 9.7% (0.097)

Calculation:  $n = \left(\frac{1.96}{0.05}\right)^2 0.097 (1 - 0.097)$

$$n = 134.6$$

$$n = 135 \text{ participants}$$