Article title: Is there a relationship between Bullying and PTSD among Nurses
Authors: Devika Samaranayake [1]
Affiliations: School of Psychological, Social and Behavioural Sciences, Coventry University, Priory St, Coventry CV1 5FB, United Kingdom[1]
Orcid ids: 0000-0003-4710-3974[1]
Contact e-mail: nedsamaranayake@gmail.com
License information: This work has been published open access under Creative Commons Attribution License http://creativecommons.org/licenses/by/4.0/, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. Conditions, terms of use and publishing policy can be found at https://www.scienceopen.com/.
Preprint statement: This article is a preprint and has not been peer-reviewed, under consideration and submitted to ScienceOpen Preprints for open peer review.
DOI: 10.14293/S2199-1006.1.SOR-.PPFFQYA.v1
Preprint first posted online: 18 May 2022
Keywords: Bullying, PTSD, Nurses, Healthcare, Psychology, Health Sciences, Behavioural Sciences
IS THERE A RELATIONSHIP BETWEEN BULLYING AND PTSD AMONG NURSES
Abstract

Today in this highly competitive world organisations demand a lot from their employees. This is not different for healthcare industries. In hospitals, nurses undergo tremendous pressures in order to ensure their patients are looked after well. But it is commonly known in the industry that nursing is one of the hardest jobs to do. This is not only because of the stresses they are put under but also due to the pressure and abuse nurse get from their peers as well as management.

Even though bullying exists in almost every organisation, it can be a cause for concern in the healthcare sector. This is because bullying will cause unnecessary stresses on nurses. Which, in turn, will result in errors. Some might be minuscule errors while some can result in fatalities. Therefore psychological well-being among nurses is a must. The stresses of bullying can be caused by being bullied or simply by observing bullying.

The aim of this study is to understand the effects of bullying and to find out how it contributes to PTSD. The researcher has identified two main aspects of bullying which will cause PTSD among nurses. Using a survey the researcher has collected data from a private hospital in Colombo in order to determine the effects of bullying and witnessing bullying.

The findings of this study will help the healthcare professionals to understand the effects of bullying and what effect it causes in nurses. Further, it will help relevant decisionmakers to take right decisions in order to prevent bullying and ensure the perfect working condition to its staff.
# Table of Content

Abstract .............................................................................................................................................................................. ii

Chapter 01 ........................................................................................................................................................................... 1

1. Introduction .......................................................................................................................................................................... 1

1.1. Research Rationale .......................................................................................................................................................... 1

1.2. Objectives ........................................................................................................................................................................... 2

1.3. Research purpose .............................................................................................................................................................. 2

2. Literature review & Research question ............................................................................................................................ 3

2.1. Introduction .......................................................................................................................................................................... 3

2.2. Workplace bullying ............................................................................................................................................................ 4

2.3. Post traumatic stress disorder .......................................................................................................................................... 4

2.4. Post-traumatic stress disorder symptoms ........................................................................................................................ 5

2.5. Bullying and PTSD symptoms ......................................................................................................................................... 5

2.6. Risk of PTSD in nurses who work in intensive care units .............................................................................................. 6

2.7. Workplace bullying ............................................................................................................................................................ 6

2.8. Bullying and psychological wellbeing ........................................................................................................................... 7

2.9. Consequences of workplace bullying ............................................................................................................................ 8

2.9.1. Social effect .................................................................................................................................................................. 9
2.10. Effects of bullying on patients ................................................................. 10

2.11. Theory behind bullying ........................................................................... 10

2.11.1. Workplace volatility ............................................................................ 11

2.11.2. Bullying and leadership style ............................................................ 11

2.12. Problem Statement .................................................................................. 12

2.13. Research questions .................................................................................. 12

Chapter 03 ............................................................................................................ 13

3. Methodology .................................................................................................. 13

3.1. Introduction .................................................................................................. 13

3.2. Conceptual framework .............................................................................. 13

3.3. Hypothesis .................................................................................................. 14

3.4. Design .......................................................................................................... 14

3.5. Sample and procedures ............................................................................. 15

3.6. Ethical consideration ................................................................................... 15

Chapter 04 ............................................................................................................ 17

4. Results ............................................................................................................ 17

4.1. Introduction .................................................................................................. 17

4.2. Preparation of data .................................................................................... 17

4.3. Sample profile ............................................................................................ 18

4.3.1. Age ......................................................................................................... 18
RELATIONSHIP BETWEEN BULLYING AND PTSD

4.3.2. Years in employment ................................................................. 19
4.3.3. Total years of experience ............................................................ 19
4.3.4. Designation ............................................................................. 21
4.3.5. Reporting structure ................................................................. 22
4.3.6. How many others in your department ........................................ 22
4.3.7. Peers ....................................................................................... 23
4.4. Testing of assumptions ................................................................. 24
4.4.1. Linearity .................................................................................. 24
4.4.2. Normality ................................................................................. 25
4.4.3. Homoscedastic ........................................................................ 26
4.5. Correlation analysis ................................................................. 27

Chapter 05 .......................................................................................... 29

5. Discussion ...................................................................................... 29
5.1. Introduction .................................................................................. 29
5.2. Key findings ............................................................................... 29
5.3. Limitations .................................................................................. 30
5.4. Recommendations ................................................................. 31

6. References ...................................................................................... 33
Chapter 01

1. Introduction

1.1. Research Rationale

Nurses are one of the most important human resources to any hospital. They are condensed to be the first line of defence. Their primary task is to ensure the well-being of the patients and help them with the healing process. Due to the nature of their work they are being exposed to personalities from all walks of life. Which means they have to deal with all the challenges that are being thrown at them in terms of work. While some of these are happy experiences there are many not so pleasing experiences as well. To complicate things, most nurses have to juggle between work and their personal family life.

In addition to the stresses they are exposed on the job, it is believed that nurses have to go through more stressful situations as a result of bullying. They are being bullied by their superiors, managers also by their peers. Not only being bullied directly but witnessing bullying also contributes greatly towards stress that nurses have to go through. Apart from feeling insecure, both mentally and physically, bullying will drastically bring down the performance of a nurse. This can be life-threatening at times, especially when they are treating patients in critical conditions. Above all reasons combined have made nursing an unpopular career path among youth hence creating a shortage of nurses in the industry.

Since nursing is such a stressful job, it is believed that some nurses develop a specific set of skills to deal with the situations, which are thrown at them but there are occasions where they are subjected to incidents which overwhelm them and where it will get into them. The standard practice is on these said situations are to go and talk to the assigned psychologist and get the matter solved.
Unfortunately, the stigma around talking to a psychologist is so bad in Sri Lanka, most of the nurses tend to keep things to themselves. Hence making the matters worse. Therefore, incidents such as depression and post-traumatic stress disorders (PTSD) are very common among nurses. This can have devastating effects on patient’s lives as well as the personal lives of these employees. Further, this can drastically affect the work environment and work culture of the hospital.

1.2. Objectives

- To identify if there is a relationship between bullying and PTSD among nurses who are working at private hospitals in Colombo, Sri Lanka.
- To identify what aspect of bullying (being bullied or observing bullying) contributes more towards PTSD among nurses who are working at private hospitals in Colombo, Sri Lanka.

1.3. Research purpose

The purpose of this research is to understand the relationship between post-traumatic stress disorder (PTSD) among nurses in relation to bullying. This study will give a special reference to nurses who are employed at a private hospital in Colombo and all its subsidiaries.

The outcome and conclusions of this study will help the top management understand how bullying and contributes towards PTSD among their nurses. This will also help them to put certain regulations and process in place to avoid such incidents as well as arrange all necessary help to nurses who are affected.

Chapter 02
2. Literature review & Research question

2.1. Introduction

There are many studies conducted in order to find out if there is a relationship between PTSD and bullying. In order to form the basis for this thesis, the researcher studied past literature, which was conducted in a similar capacity. Using the finding of these studies the researcher was able to defend the research question, the research objectives and the tools which should be used in order to conduct this research.

There have been many researches carried out in the past in terms of the relationship between PTSD and bullying. Some of them were conducted in an early stage of the life such as being bullied at school, while some concentrate at being bullied at work. There have been many studies done in this context under many different concepts. Such as ‘Emotional abuse at work’ (Keahsly, 1998), ‘Harassment at work’ (Brodsky, 1976), ‘Bullying at work’ (Vartia, 1996), etc. Even though there are many researches done to figure out the relationship between bullying and PTSD among nurses internationally, there are very limited to no research done in Sri Lankan context.

According to a study by Bartholomew nursing as a profession is dominated mainly by females and women bullies target other women 84% of the times (Bartholomew, 2006). Further Trossman discovered in one of his researches that bullying can result in many stress reactions. Implications such as, major psychological, physical, and even financial difficulties. The victims are found to experience depression and anxiety. Which can lead up to PTSD (Trossman, 2008). Some victims have claimed to lose their self-confidence, which affects their day-to-day life. Not only self-confidence but also self-esteem and sense of worth are questioned. Victims became doubting themselves constantly as a direct result of bullying. Many victims
have explained their feelings as being psychologically terrorised and being emotionally raped (Speedy, 2006).

Studies have shown that workplace bullying can result in both psychological and emotional symptoms (MacIntosh, 2005). In a study done in Finland to investigate the relationship between bullying and sick leave at hospitals, it was found out that victims of bullying tend to take 26% more medical leave compared to none bullied employees. The study was done among 5000 nurses (Kivimaki, et al., 2000). Further according to Einarsen, Matthiesen, and Skogstad (1998), bullied nurses have a significant increase in burnout and lower job satisfaction.

2.2. Workplace bullying

With the increase of reports and studies done the workplace bullying, it has been given several definitions. Emotional harassment and abuse, mobbing, victimisation and mistreatment are identified by Einarsen (1999) as bullying. According to him “systematic persecution of a colleague, subordinate or superior, which, if continued, may cause severe social, psychological and psychosomatic problems for the victim” (Einarsen, 1999; p 156) is bullying. According to Leymann (1990), bullying is a common phenomenon in everyday life. But it only becomes bullying when the behaviour is regular and with the intention of humiliating an individual and causing harm (Leymann, 1990). Based on this bullying is also defined as chronic than acute form of behaviour which is similar to domestic violence (Roberts, 2000).

2.3. Post traumatic stress disorder

PTSD or post-traumatic stress disorder is an anxiety disorder, which is defined by a set of symptoms. Which are namely re-experience, avoidance and arousal. These symptoms
have to persist in a victim who was exposed to a traumatic incident for at least a month. Contrary to other psychological disorders, in order to diagnose a patient with PTSD, the traumatic event has to fulfill certain criteria. According to the American Psychiatric Association, these events can be natural disasters, physical assault, rape, accidents and armed conflict. But this belief has been counter-argued by many researchers such as Scott and Stradling (1992), and Leymann and Gustafsson (1996).

2.4. **Post-traumatic stress disorder symptoms**

According to Kilpatrick, PTSD is different from most of the psychiatric disorders. (Kilpatrick, et al., 2009). According to the American psychiatric association there are six key diagnosis criteria in order to be diagnosed with PTSD. Which are:

A. The victim must be exposed to server trauma
B. It has to cause a significant distress in the victim
C. The distress has to be persistent for more than a month
D. The traumatic incident is regularly experience by the victim
E. The victim avoided the stimuli or the scenario which will bring back memories of the traumatic incident
F. The victim shows persistent symptoms of increased arousal

(APA, 2000)

2.5. **Bullying and PTSD symptoms**

In most of the past literature, the symptoms of PTSD and the link to bullying is discussed. There are many studies which concluded that there are significantly high levels of PTSD symptoms of victims who have been exposed to bullying compared to personnel who are
exposed to other incidents (Lancaster, et al., 2009). Further many studies point out the harm bullying can cause in children and adolescents, during this time the brain is pondering several changes biologically, psychologically and socially. This changes or developments involves various cognitive, behavioural and emotional systems in a child. threat (Bremner, 2006). The same systems can be effected by bullying among adults.

2.6. Risk of PTSD in nurses who work in intensive care units

According to Mealer, Jones and Mossa (2012), nurses who work in intensive care units have a high risk of developing psychological problems such as post-traumatic stress disorder (PTSD) (Mealer, et al., 2012). Even Though they are at high risk some nurses thrive in these work environment. And it is believed that these individuals have built a certain resilience towards the stress they are exposed to (Milne, 2007). This built up resistance can be studied using cognitive behavioural therapy, which is a common counselling technique which is used to help individuals to understand inaccurate and negative thinking (Milne, 2007).

2.7. Workplace bullying

When reading through past literature, there is no definitive explanation or a definition of workplace bullying. But there is a common agreement between authors that there is a distinctive difference between a simple conflict at work and bullying. Bullying occurs more frequently and for a longer time. (Leymann, 1996). Another major difference between workplace bullying and a simple conflict is that the victim or the person who is being bullied cannot defend themselves. This is because the person who is being bullied generally has less power over the bullies. (Lutgen-Sandvik, et al., 2007). Before it was called as workplace
bullying the phenomenon was known as ‘mobbing’. It was first identified by a Swedish psychologist, Heinz Leymann in the 1980’s (Einarsen & Mikkeisen, 2003) The name bullying was given by the British scientists in the 1990’s ‘bullying’ (Rayner & Keashly, 2005). When it comes to literature which is related to nursing, bullying is defined as ‘workplace aggression’ (Farrell, et al., 2006). ‘lateral or horizontal violence’ (Griffin, 2004) or ‘verbal abuse’ (Rower & Sherlock, 2005). The main problem of not having a clear definition of workplace bullying is that the results and findings of researchers cannot be compared to each other. Further, the findings cannot be generalised to other groups or organisations.

According to some researchers, bullying can be very subtle and under the radar. Making acts of bullying hard to detect as aggression (Rayner & Keashly, 2005). Bullys through physical and verbal abuse and aggression threatens the social status of the person who is being bullied. Actions such as isolation, withholding information spreading of rumours and ignoring the person itself is considered as bullying at workplace. bullying (Zapf & Einarsen, 2005). Further bullying can be in the form or unrealistic workload and deadlines and even excessive monitoring of the bullied individual’s work (Quinn, 2001) Apart from the above-discussed areas, some researchers talk about a form of bullying where an individual professional status is destabilised by giving them meaningless tasks which are below their level of competence and removing key areas of responsibility (Quinn, 2001).

2.8. Bullying and psychological wellbeing

There have been many studies that have shown bullying has a negative impact on employee wellbeing (Rayner & Cooper, 1997). These studies go further to elaborate how bullying would increase levels of anxiety, depression, poor mental health and even post-traumatic stress among workers (Bond et al., 2001). As discussed above, to be diagnosed with
post-traumatic stress the victim has to encounter a life-threatening scenario or an incident that challenges the physical integrity. Even though bullying does not meet these criteria, a victim of bullying shows most of the symptoms of post-traumatic stress. Which is very similar to victims of rape (Leymann & Gustafsson, 1996). There have been cases where the post-traumatic stress levels of a bullied employee were significant when compared to a train driver who had run over people. (Malt et al., 1993).

2.9. Consequences of workplace bullying

Apart from having physical and psychological implications among their victims (Leymann, 1996) bullying will cause implications and disrupts the normal process in organisations. This is a result of poor performances, attrition, and low job satisfaction (Quinn, 2001) Health Effects.

It is commonly accepted that bullying results in a very stressful situation. And stress would affect negatively on health. Specifically, it may cause physical and psychological damage (Leymann, 1996). Further apart from directly being bullied, it has been observed that members of a company who has witnessed bullying also experience the same stress levels (Einarsen & Mikkeisen, 2003). This also results in anxiety, depression, low self-esteem and even suicidal ideations (Einarsen & Mikkeisen, 2003). Up to the level of 10%, respondents admitted that they have contemplated suicide before. This was found out in a study done in Turkey using nurses (Yildirim & Yildirim, 2007). And all of these symptoms which is shown by victims who were bullied and witnessed bullying are very similar to PTSD (Einarsen & Mikkeisen, 2003). However, as discussed earlier they cannot be diagnosed as PTSD since they do not meet the required criteria.
Apart from psychological implications, bullying also results in implications for physical health too. Most of the victims complain of stomach aches, headaches, dizziness, chronic fatigue, insomnia and in some cases backaches. (Moayed, et al., 2006). Even though the exact cause is not determined yet, studies have found victims of bullying would have a higher body mass index (Kivimaki et al. 2000). Others studies have shown victims of bullying are more likely to take more sick leave and miss work when compared to employees who were not bullied. A study conducted in Finland, in a hospital, the researchers found out that 2% of the sick leaves were a direct result of bullying (Einarsen & Mikkeisen, 2003)

2.9.1. Social effect

Not only in physical and psychological level but bullying effects the victim’s social life. Both work life as well as personal life. Most of the bullying victims claim that they feel like they are isolated at work and day to day life. Some even compared it having a social death (Lews & Orford, 2005). There have been instances where bully times behaves in a socially unacceptable manner as a coping mechanism for bullying, which makes the social isolation more prominent and worsens the situation (Einarsen & Mikkeisen, 2003). Further, as most of the victims tend to spend more time at work and concentrating on work-related issues as a result of the bullying, their relationships outside work also suffers (Lews & Orford, 2005). As Einarsen & Mikkelsen (2003) sated it “victimization due to bullying at work may not only ruin employees’ mental health, but also their career, social status and thus their way of life” (Einarsen & Mikkelsen 2003, p. 127).
2.10. Effects of bullying on patients

In a study conducted in UK hospitals, the nurses admitted how they became less passionate and tolerating towards their patients when exposed to bullying (Randle, 2003). In another study done in Australia two-thirds of nurses have admitted to making errors while caring for patients when they were upset over an aggravated incident that happened at the hospital aggression (Farrell, et al., 2006). Adding to that in a study conducted in America, 13% of nurses responded saying the abuse and bullying caused them to make mistakes when caring for their patients (Rower & Sherlock, 2005). Further, a study conducted by Griffin (2004) found out that new nurses in America are reluctant to ask questions from their superior because of the stigma and generalised levels of bullying. This directly has resulted in more inexperienced nurses which translates to more errors when it comes to patient handling (Griffin, 2004).

Apart from the above-stated mistakes due to bullying, general patient care is also affected negatively by bullying. This is as a result of less job satisfaction and being upset. Some nurses even complained that they have less energy to carry out their work due to bullying energy (Quine, 2001). Further many nurses mentioned they are far less tolerant of patients and would not even want to come to work (Rutherford & Rissel, 2004). Finally, as we discussed bullying can directly effect on sick leave taken by nurses which means being short staff is quite often. This can directly affect the patent care standards (McKenna, et al., 2003)

2.11. Theory behind bullying

Before it was believed that the organisations played a vital role in enabling and triggering bullying, it was believed that it was as a result of individual employees’ behaviours (Hole & Beal, 2006). Further apart from its employees, staff can be bullied by its procedures
and policies (Liefooghe & Davey, 2003). Finally, there are few researchers who argue that bullying is a direct outcome of how the company is operated (Ironside & Seifert, 2003).

2.11.1. Workplace volatility

The volatility of an organisation plays a vital role in bullying. If an organisation is not stable and in a process of downsizing or restructuring, it creates the ideal environment for bullying (Hole & Beal, 2006). Future change in an organisation, especially in healthcare sector leaves nurses to be more vulnerable. Even though this cannot be avoided (Hutchinson, et al., 2006). In a study conducted in an Australian hospital, it was observed how a newly introduced change process was used as a tool to bully nurses. Apart from using it as a tool to bully, the change management was used to hide any bullying as well (Hutchinson, et al., 2006). Apart from the aspects, other factors such as the need to increase the workload of nurses while being operating at minimum cost and improve productivity puts unnecessary pressure on nurses. All these features create the ideal environment for bullying to happen and thrive (Farrell, et al., 2006).

When looking at studies conducted in other industries it can be observed that stressful and negative environments, not having a definitive job role or job ambiguity and conflicts in job role (Hole & Beal, 2006).

2.11.2. Bullying and leadership style

Management is more often contribute to bullying directly or indirectly. In a study conducted in the UK, 59% of nurses said they were bullied by their managers (Quine, 2001). Many studies conducted in a similar manner in Austraila, New Zeland and the USA supports these findings. In pasts studies conducted by scholars, it is observed that there is two leadership
style which leaves room for bullying. Which are laissez-fair and highly authoritarian (Hole & Beal, 2006). More often some managers use bullying as a method to get their staff to work more (Lewis 2006). According to a study done by Hutchinson (2005), most of the employees complained that they felt like their managers were using legitimate company policies to bully them (Hutchinson, et al., 2006). Further they reported that they were intimidated by standard evaluation processes (Daiski, 2004).

2.12. **Problem Statement**

According to the above-discussed discussion, there is a literature gap which did not fulfil the requirement by recent studies and an empirical gap that indicates the importance of this research in the current context. Therefore, this research is centred on finding “Is there a relationship between bullying and Post traumatic stress disorders (PTSD)?” with special reference to private hospital in Colombo, Sri Lanka.

2.13. **Research questions**

- Is bullying related to PTSD among nurses who are working at a private hospital in Colombo, Sri Lanka.

- What aspect of bullying (being bullied or observing bullying) contributes more towards PTSD among nurses who are working at a private hospital in Colombo, Sri Lanka.
3. Methodology

3.1. Introduction

In this section, the researcher discusses methods which are used in to conduct this research. Future this section talks about the bare bones of the study, which is the conceptual framework. Using the conceptual framework the researcher formulated the hypotheses which will be tested in this study. Finally, this section talks about the sample size of this study as well as research design.

3.2. Conceptual framework

Using past literature, the researcher identified the independent and dependent variables accordingly. The independent variable was broken down to 2 different measurement indicators which are:

- Being bullied at work
- Observing or witnessing bullying at work

While the dependent variable is set to be showing symptoms of PTSD.
3.3. **Hypothesis**

- **H1**: There is a relationship between being bullied at work and Post Traumatic Stress Disorder?
- **H2**: There is a relationship between observing bullying at work and Post Traumatic Stress Disorder?

3.4. **Design**

This research will be conducted using quantitative approach. The researcher used various sources to collect secondary data, such as hospital records, government reports, etc. Using these data the researcher was able to identify if the problems stated in past literature, especially in foreign literature can be generalised to Sri Lanka as well. For an example, if the average turnover is high, it can be assumed that bullying These secondary information is used to identify the scope of this study on this research. In order to collect primary data, the researcher is using a survey as the main tool to collect primary data from the population.
3.5. **Sample and procedures**

When considering the total population of private medical hospitals in Colombo it is estimated to be around 130 nurses. This is female nurses who are directly dealing with patients in medical hospitals in Colombo. Therefore, according to sample calculating tool G* Power 3.1, the sample size is 98 with an error probability of 0.05.

The chosen sampling method for this study is simple random sampling. The single sampling method is used because almost all of the population (all 130) is almost identical. Because all nurses are females and have gone through similar training and have been exposed to the similar working environment. Which are private medical hospitals in Colombo. Also, due to the time constraints, this is the most suitable sampling method for this study.

3.6. **Ethical consideration**

Since the study involves vulnerable and personal information, the researcher would take all necessary steps to conduct this study ethically. The data will be collected and stored according to American Psychology Associations’ Guidelines (APA 2000). All collected data will be anonymised to ensure the privacy of respondents.

Further the respondents have the free will to choose to take part in the study, Even after submitting their surveys they can request to omit their repose from the study within 2 weeks of providing the answers. The participants will not be given any monitory or any other benefit for participating. Therefore, the motivation for the participation is on their own and the responses will be honest.

Finally, some participants may experience a slight emotional or psychological distress due to the nature of the questions as well as the study. Therefore, the researcher will take necessary
measures in order to provide necessary psychological support to participants. This will be done through a councillor at the CIRP Life Centre.
4. Results

4.1. Introduction

This chapter showcases the analysis performed on collected primary data and the outcome of it. The data was analysed using statistical tools mentioned above in order to find out if they fulfil the established hypothesis. The conclusion and all discussions are all based on the outcome of the analysed data.

4.2. Preparation of data

Before the data is analysed in order to understand the relationships, they need to be prepared for analysis. This is important because the outcome may be erroneous due to incomplete and wrong data. Green and Tull in 1978 gave some guidelines to prepare data in their paper of Research and Marketing decisions. The guidelines stress checking the completeness of the entries, their Legibility and Consistency of entries. To ensure the data collected meets the above-said criteria, the researcher checked every individual questionnaire to verify the accuracy. Only questions which fulfil the above said criteria were used in this study. After the vetting process out of the 124 collected survey responses, the researcher used 99 survey answers for this study.
4.3. **Sample profile**

The brief overview of the respondents who took this survey is given in this section. This is in hope of understanding and identifying if any external factors such as Age, years of experience, designation, and peers could influence the outcome of the study.

4.3.1. **Age**

The age was the first demographic sample which was collected. Below is given in below Table 01. Here most of the respondents belong to 25 – 34 age category which is 52%. While 24% is from 45 – 55 age category.

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid 18 – 24</td>
<td>7</td>
<td>7.1</td>
<td>7.1</td>
<td>7.1</td>
</tr>
<tr>
<td>25 – 34</td>
<td>51</td>
<td>52.0</td>
<td>52.0</td>
<td>59.2</td>
</tr>
<tr>
<td>35 – 44</td>
<td>16</td>
<td>16.3</td>
<td>16.3</td>
<td>75.5</td>
</tr>
<tr>
<td>45 – 55</td>
<td>24</td>
<td>24.5</td>
<td>24.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

*Table 01. Statistical analysis of Age demographic*
4.3.2. **Years in employment**

![Pie chart showing years in employment](image)

*Figure 02. Graphical representation of years in employment*

Looking at the above Figure 02 it can be concluded that 37% of the population have been working for 6 – 8 years. While closely followed by respondents who have worked for more than 9 years. Which makes up 32% of the population.

4.3.3. **Total years of experience**

The differentiation between total years of experience and employment time is that some respondent has work in different organisations before being an employee in the current organisation. Here looking at figure 03, it can be observed that 43 respondents has more than 9 years of experience which is the highest category. Followed by 34 participants who have total work experience of 6 – 8 years. Finally, 11, 8 and 2 respondents have experience of 3 – 5, 1 – 2 and less than a year respectively.
Figure 03. Distribution of total years of experience of the sample
4.3.4. Designation

According to above-given figure 04, most of the participants are at an executive level in their current employment, which makes up 85% of the respondents. Only 11% of the population holds a trainee position and only 4% of the respondents hold a managerial position in their current employment.
4.3.5. Reporting structure

![Pie chart showing reporting structure of respondents]

Figure 05. Reporting structure of respondents

Above figure 05 represents the responses given in terms of reporting structure. Here the question asks if the respondent is reporting to a male or female member of staff. Looking at the above graph it is observed that most of the respondents report to a female member of staff. Which is 91% of the population. Further, only 9% of the respondents report to a male member of staff.

4.3.6. How many others in your department

Below (Table 02) is given the summery of responses given by the participants in terms of how many other peers they are working within the same department. Here 72% of the respondents said that they have more than 21 members in their own team. While only 17% said
that they have team members of 11 – 20. Finally, 4 and 3 respondents said that they have 6 – 10
and less than 5 members of their team respectively.

<table>
<thead>
<tr>
<th>How many others in your department?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid .00</td>
</tr>
<tr>
<td>0 – 5</td>
</tr>
<tr>
<td>6 – 10</td>
</tr>
<tr>
<td>11 – 20</td>
</tr>
<tr>
<td>More than 21</td>
</tr>
<tr>
<td>5.00</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>17</td>
</tr>
<tr>
<td>71</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>98</td>
</tr>
</tbody>
</table>

Table 02. Statistical analysis of peers in the department

4.3.7. Peers

Figure 06. Distribution of gender among peers
Here the researcher wanted to find out who the respondent will work with. Looking at the above-given figure, Figure 06 it can be observed that almost all of the respondents (98%) work with female colleagues. And only 2% is working with male colleagues.

4.4. Testing of assumptions

Before the collected data is put through analytical techniques to determine the outcome, the data needs to be validated to confirm that they meet certain assumptions. This is to ensure that the outputs are accurate. Since the researcher is using correlation analysis, which is a parametric test, the fulfilment of these assumptions is a must.

4.4.1. Linearity

One of the main assumptions the data needs to fulfil is that they are linear. Here the researcher used SPSS has plotted a scatter plot diagram for all three variables. The scatter plot is given below in Figure 07.
Looking at the above figure it can be concluded that the data is distributed linearly. This is because all the data is distributed evenly in respective regions without any overlap. Further, all the data points are reasonably gathered in a bunch. Therefore it can be assumed that these data are linearly distributed.

4.4.2. Normality

Here both the independent and dependent variables were tested to check if they were distributed linearly. SPSS was used when conducting the normality test. According to the statistical practices, there are two major methods in order to test normality. The graphical...
method as well as statistical method. Here the researcher opted for the statistical method. Looking at Table 03 given below, it can be observed that Sig. values are all lower than 0.05 which means they are statistically significant. Hence it can be concluded that the data are distributed Normally.

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Being bullied</td>
<td>.222</td>
<td>87</td>
</tr>
<tr>
<td>Witnessing bullying</td>
<td>.244</td>
<td>87</td>
</tr>
<tr>
<td>PTSD</td>
<td>.241</td>
<td>87</td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction

*Table 03. Kolmogorov-Smirnov and Shapiro-Wilk test of sample*

4.4.3. Homoscedastic

Apart from the above-discussed normality and linearity, homoscedasticity is one of the most important assumptions that need to be fulfilled. This is because it can be assumed that the errors remain same across all levels of variables when the data are homoscedastic. The homoscedasticity is tested using levies test in SPSS.

Looking at the above table, table 04 the p-value for Levine's test is 0.089 which is greater than 0.05 therefor the variance are not significantly different. Therefore it can be concluded that the data are homoscedastic and has fulfilled the assumption.
Levene's Test of Equality of Error Variances

<table>
<thead>
<tr>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.040</td>
<td>38</td>
<td>48</td>
<td>.089</td>
</tr>
</tbody>
</table>

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Being_bullied + Witnessing_bullying + Being_bullied * Witnessing_bullying

Table 04. Levene’s test for testing of Homoscedastic

4.5. Correlation analysis

In order to answer the research questions and to test the hypothesis, the data was analysed for specific correlations. Here using SPSS the researcher studied the correlation between independent and dependent variables.

<table>
<thead>
<tr>
<th></th>
<th>Being bullied</th>
<th>Witnessing bullying</th>
<th>PTSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being bullied</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.880**</td>
<td>.742**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>95</td>
<td>91</td>
<td>91</td>
</tr>
<tr>
<td>Witnessing bullying</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.880**</td>
<td>1</td>
<td>.802**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>91</td>
<td>94</td>
<td>90</td>
</tr>
<tr>
<td>PTSD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.742**</td>
<td>.802**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>91</td>
<td>90</td>
<td>94</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 05. Correlation analysis between dependent and independent variable
Looking at the correlation between being bullied and PTSD in above table 05, it has registered an r value of +.742. Here since the value is positive it can be concluded that there is a positive relationship between being bullied and PTSD. Further, since the r value is close to 1 it can be concluded the there is a significant correlation between the two variables.

When considering the correlation between witnessing bullying and PTSD the r value is at +.802. Again, even in this instance, the relationship is a positive relationship. Which means it can be concluded that there is a positive relationship between the two variables. Since the r value being at .802, there is a significant impact on PTSD by witnessing bullying.
Chapter 05

5. Discussion

5.1. Introduction

Upon analysing the data and understanding the outcomes the researcher has summarised the findings in this section. Here the researcher would keep the focus on answering the research questions set fort earlier in this report as well as discussing the validity of the hypothesis. Finally, this section is written to full fill the research objectives.

Furthermore, the researcher has discussed the limitations of this study and how it can be improved in future studies. Finally based on the findings the researcher has set forward some recommendations which can be implemented in real life. This will help to improve the mental health in the healthcare profession in Sri Lanka as well ensure wellbeing for all the nurses who are exposed to such circumstances.

5.2. Key findings

Based on the analysed data the researcher was able to identify few clear outcomes. Further, the industry experience the researcher has obtained over the years also validated the statistical findings.

The first outcome was that there is a significant correlation between being bullied and PTSD. This was proven in the correlation analysis. Further, the relationship is a positive relationship. Which means that more a person is exposed to bullying the more likely the person would be diagnosed with PTSD. Further, since the relationship is .742, which is close to 1 it can be concluded that the effect of being bullied will significantly affect Post Traumatic Stress Disorder. Based on the all the above given evidence, it can be concluded that the first hypothesis
which is *There is a relationship between being bullying at work and Post Traumatic Stress Disorder* can be considered true and accepted.

Secondly, the correlation between observed bullying and being diagnosed was tested using the correlation analysis. Again, same as being bullied, the relationship is a positive one. Which means more a person witness bullying the more changes they have to be diagnosed with PTSD. Further, the correlation between both variables, witnessing bullying and PTSD is at .802, therefore there is a significant relationship. Finally, it can be concluded that this also fulfils the criteria of the second hypothesis and it can be accepted as well. The second hypothesis is *There is a relationship between observing bullying at work and Post Traumatic Stress Disorder.*

Considering above discussed aspects the first research question can be answered as yes there Is bullying related PTSD among nurses who are working at private medical hospitals in Colombo.

Finally, when compared the r figures in Correlation analysis, it was observed that the correlation of witnessing bullying is .802 while being bullies is at .742. Which means witnessing bullying has more effect on Post Traumatic Stress Disorder when compared to directly being bullied. Hence answering the second research question *What aspect of bullying (being bullied or observing bullying) contributes more towards Post Traumatic Stress Disorder among nurses who are working at private medical hospitals in Colombo.* The aspect that contributes more towards PTSD is witnessing bulling among the two aspects.

### 5.3. Limitations

Even though the researcher took maximum effort in order to conduct this research thoroughly, the time and budget constraints meant that the research contained some limitations.
One of the first limitations is that the researcher only conducted this study in private hospitals in Colombo. By winning the sample size into state hospitals as well as nurses working in other locations apart from Colombo might yield a different outcome. Therefore, it is advised to carry out further studies by increasing the population of the study.

Further, the researcher has only considered two aspects that would impact bullying. Which is being bullied and witnessing bullying? In addition to these two aspects, there can be more parameters that effect being diagnosed by PTSD among nurses. Including these aspects might also vary the outcome.

Finally, this study was conducted in English medium and using a survey. If the study was conducted using a different language the outcome might have changed due to Sinhala being the mother tongue in Sri Lanka. In addition, a qualitative research such as an interview would also result in different outcomes. Therefore the researcher would highly recommend further studies by giving consideration to these limitations.

5.4. Recommendations

Based on all the above findings it can be safely stated that bullying has a profound effect on being diagnosed with PTSD among nurses. This is a very useful insight into all private hospital management in the country. Mainly because nurses mainly who is in critical care has to be in a top mental form in order to take quick and accurate decisions. Since a mistake can be fatal.

Further, since being bullied and witnessing bullying both, has a significant effect on Post Traumatic Stress Disorder, the decision makers should take that aspect into consideration.
Therefore they have to ensure that the nurses are not exposed to such incidents. This will invariably improve the service they could offer their clients.

Finally, apart from top decision makers, all nurse and peers should understand that this can effect everyone and take necessary actions to prevent bullying among themselves.
6. References


Bartholomew, K., 2006. Ending Nurse-to-Nurse Hostility: Why Nurses Eat Their Young and Each Other. HCPo Inc: Marblehead, MA.


