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A study to assess the perception and attitude of nurses towards violence and aggression a cross-sectional study in mental health service (HMC), Qatar.

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Abstract
Patient Aggression has always been recognized as one of the most critical concerns in the healthcare sector, but even after all these considerations, it shows quite an increase with time. Nurses are around the patients 24 hours, providing those healthcare services; they get impacted by this aggression the most (Wong & Chien, 2017). Hence staying under this constant stress can lead them to consider leaving nursing as a profession. And for those trying to maintain their spaces in this profession, handling such aggressive and violent patients is one big task which stands at 16% as indicated by (Wong & Chien, 2017).
Aim: *To assess the perception and attitude of nurses towards Aggression and violence and in mental health services (HMC).*
Participants: *All the nurses in Mental Health Service in Hamad Medical Corporation (HMC) were invited to participate in the questionnaire. The choice of one particular setting helped reduce the bias related to the environment.*
Methodology: *A cross-sectional research design was applied to assess nurses' perceptions and attitudes regarding aggression and violence exhibited by patients in Mental Health Service*
The results are presented in five sections from Demographic factor such as years of experience, position and PMVA training, while the The Perception of Aggression Scale Short (POAS-S) Version Questionnaire and the Impact of Patient Aggression on Carers Scale (IMPACS) used for assess the nurses perception and attitude towards aggression and violence. Hence, the Relationship between demographic data of the studied nursing staff and their attitude toward violence behaviours that exhibited by mental health patients in HMC. SPSS software was used for data analysis, Shapiro Wilk test to define population distributed, , interquartile range [IQR] was presented to measure statistical dispersion and ANOVA test was used for comparing variables.
Conclusion: *The study found that there is a statistically significant relationship between overall dysfunctional/ undesirable phenomenon of aggression among nursing staff and attending PMVA. while there was statistically significant relationship between overall functional/ comprehensible phenomenon of aggression among nursing staff and attending refresher training, , it is clear that some of the nurses feel offended and hurt and this may affect their work performance.*
The study verified that there was no statistically significant relationship between overall violence perception and demographic characteristics of nursing staff except experience years in mental health service, especially between nursing staff who having experience years between 4-7 years and more than 7 years.

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I. INRODUCTION

1.0 Introduction

In the recent decades there has been rapid development and growth of health care system worldwide. In the State of Qatar has been delimitating new healthcare system policies and strategies in the direction of building a new a world-class system in healthcare. The priority has emerged about the Mental Health and the need for development in this service. Hence, Expansion and redefine the mental health services in Qatar is started (Wadoo et al., 2020). The mental health service in Qatar is started for development but it's still in the early phase of that, in addition, the plans is ongoing to increase the capacity of the inpatient units and widening the services offered by the community mental health services. (Wadoo et al., 2021)

The development of nurses who are working Mental health service in Qatar is vital to achieve the goals of the service development. Therefore, the nurse's education service in Mental health start in 2015 to give (MOAV) training to nurses. This education program starts to be developing since that. And start to be Mandatory for all mental health nurses in HMC. from 2019 more development is done on the course and the name PMVA start officially used.

The MOAV and PMVA training is three days training divided to:

Day 1: full day education to understand the mental health patient's behaviour, aggression, violence, De-escalation and patient's observation. At the end of the day 3 hours simulation will be done to ensure that nurses are able to de-escalate the patient. and all that without using any physical or chemical restraint. Everything supposed to be done verbally.

Day 2: in the second day the education started when the patient is not de-escalated and start to be physically aggressive. In this day the focus on the breakaway technique to maintain safety for patient and nurse.

Day 3: start when all techniques is failed,the patient start to be risky to self and others. In this day the training is about how to hold and restraint the patient safely.

1.1 Background of the study

Patient aggression is a common issue in a clinical setting. Many studies usually refer to aggression and violence as synonyms without differentiating those (Jeong & Lee 2020; Schablon et al. 2018). However, Harwood (2017) has differentiated these notions having defined violence as "the use of physical force, verbal abuse, threat or intimidation, which can result in harm, hurt or injury to another person" and "aggression" as "a hostile behaviour or threat of attack" (p. 76). Analysing aggression in a clinical setting, the studies refer to two major definitions of violence, developed by the World Health Organization and the National Institute of Occupational Safety and Health. The World Health Organization (2021) defines aggression in a workplace as "incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health". The National Institute of Occupational Safety and Health (2002) defines workplace violence as "the act or threat of violence, ranging from verbal abuse to physical assault directed toward persons at work or on duty". Each of these definitions is applicable to violence and aggression in clinical setting.

Nurses usually feel resistance to responding to aggression considering it a part of their job (Edward et al. 2014). Moreover, many nurses tolerate aggression seeing it as something unavoidable (Harwood 2017). Aggression spoils the relationships between nurses and patients, and it may reduce the quality of care (Molina-Mula & Gallo-Estrada 2020). Nurses who spend 24 hours with patients experience a higher level of pressure and aggressive reactions from patients (Wong & Chien 2017). Constant stress and aggressive attitude from the side of patients may lead to nursing burnout and retention as a result of weak satisfaction from the work (Tziner et al., 2015). Thus, the resolution of the issues related to patient aggression becomes a priority in establishing a healthy environment in a healthcare setting.

1.2 Problem statement

Many factors may lead to patient aggression. Crowded wards, an uncertain environment of communities, and staff behaviour are some of the factors that may result in patient aggressive behaviour (Ulrich et al. 2018). Substance use is also associated with aggressive behaviour among patients (Akçay & Akçay 2020). Laukkanen et al. (2019) have noticed a link between nurses' attitudes towards violent patients and valid behavioural factors for dealing with such patients. Experiencing aggression, nurses may feel a desire to respond. In this case, the target of the aggression may be other patient (54%) or nurses themselves (self-harm) in 25% of cases as indicated in the research by Schablon et al. (2018). Viottini et al. (2020) have reported that mentally ill patients are usually more aggressive in comparison to patients from other departments. This is the reason for focusing on mental healthcare setting. Mental Health Service in Hamad Medical Corporation (HMC) was selected as the study setting due to the presence of the required department and a convenient geographical location of the unit.

The emergence of teaching and training on the (PMVA) is one of the means of dealing with the issue effectively. The courses cover the techniques of how to behave with aggressive patients. Recent research has pointed to the effectiveness of the training. Thus, Jonker et al. (2018) has indicated the effectiveness of the strategy of isolation for dealing with an aggressive patient. However, as shown by Jalil et al. (2017). Assessing the perception and attitude of nurses towards violence and aggression in the workplace may help nurses cope with the issue more effectively. Collecting data about the attitudes and perceptions of nurses of aggressive behaviour of patients may help develop a training curriculum to ensure that the solutions offered to cover the current needs in the healthcare setting.

II. LITERATURE REVIEW

2.0 Introduction

This section aims to conduct a review of a wide range of literature that has been assessed previously in order to gain in-depth background knowledge of the research topic. The aim of the research is to assess the perception and attitudes of nurse toward violence and aggression in mental health services. The evaluation of various papers was done in order to gain an understanding of the research topic, develop a theoretical framework and assess the gaps in the literature on the basis of which further study was conducted.

2.2 Research Strategy

The databases that have been accessed in order to retrieve the articles include CINAHL, Medline and PubMed. These are stated to be reliable and valid databases that offer high quality nursing articles (Eriksen and Frandsen 2018). The keywords that were used for the search process includes "perception", "viewpoints", "attitudes", "nurses", "violence" and "aggression". The use of Boolean operators such as "AND" and "OR" was used for searching the articles. A total of 14 articles were accessed. The exclusion and inclusion criteria were used that include:

Inclusion criteria	**Exclusion criteria**
Papers after 2004	Papers before 2005
English	Other languages
Full free text	Abstract

2.3 Review of Literature

2.3.1 Prevalence of violence and aggression

The examination directed by Tomagová et al. (2016) includes deciding the rate pace of the types of inpatient hostility toward medical caretakers who work in mental wards, recognizable proof of disposition to patient animosity, factors identified with event and the board of animosity. Furthermore, it includes the assurance of contrasts between medical caretakers regarding instructive preparing that centres around the issue identified with patient animosity. The utilization of a quantitative cross-sectional examination was led where a conscious methodology in choosing respondents was utilized. The example incorporates 223 attendants, whose average age was 21.27 in clinical practice. The information was gathered utilizing self-appraisal scales like the Violence and Aggression of Patients Scale (VAPS), Attitude Towards Aggression Scale (ATAS), The Management of Aggression and Violence Attitude Scale-Likert (MAVAS-L). From the outcome, it was tracked down that 98.58% of the accomplished inpatient hostility was found to take part at the time of study.

As per a study by Jeffery and Fuller (2016), an aggression registration study was conducted using 437 subjects in psychiatric hospitals in Belgium using the Staff Observation Aggression Scale-Revised. This revealed that a mean of 1.7 events per patients in a year occurred with an average severity score of 9.69 and only a low percentage of the subject was responsible for almost half of the incidents. The findings state that female and less experienced nurses can be blamed for aggressive behaviour among patients. The factors that have been evaluated include gender, secondary traumatic stress, burnout and compassion satisfaction that accounts for 26.2% of mental health self-efficacy. Thus, it can be implied that there is an attention to professional quality in mental health nurses and to offer self-efficacy and a positive attitude in coping with the issue.

As critiqued by Lepiešová et al. (2015), violence within health services is found to be a growing concern that affects patient safety and service among clinical and non-clinical staff in a different setting in the mental health services. The evidence from a number of studies has demonstrated an increase in the number of reported cases related to violence and aggression among staffs and other services users. The issues in mental health have a significant impact on people who are directly involved in offering care to patients. It has been estimated that 6 people that include family, friends, partners and care givers are affected due to the outcome of mental health issues (Needham *et al.* 2004).

There is a non-partisan mentality toward the utilization of real-time techniques (Partridge and Affleck 2017). It was tracked down that the time of medical caretakers affects the significance of inside factors in the event of inciting in quiet animosity. Along these lines, it tends to be finished up by expressing that there is a high level of medical caretakers who have individual experience of a specific type of hostility from patients. The negative mentalities toward animosity were discovered to be ruled in the examination and in this manner, it focuses on the interior elements. The perspectives of an attendant regarding patient hostility affect the choice of the executive's systems in cases.

According to the investigation led by Pekurinen et al. (2017), it tends to be tracked down that the wellbeing of attendants is connected with patient hostility and there are less examinations directed that has recognized the distinction in the relationship between the medical caretakers working in an alternate office. Consequently, the point of the examination was to point in assessing and contrasting the pervasiveness related

with patient hostility and the connection between understanding animosity and the prosperity of the attendant in both mental and non-mental settings. A sum of 5288 attendants were enlisted as subjects, where 923 mental medical caretakers, 4070 clinical and careful medical attendants and 295 crisis attendants have taken part in the examination. The abstract measures were utilized for assessing the event of patient animosity and prosperity of medical caretaker that included factors like the soundness of patients, unsettling influence in rest, mental misery and the apparent work capacity. The utilization of double calculated relapse that associates with the term was utilized for contrasting the connection between persistent animosity and the prosperity of medical caretakers.

In a critical review conducted by Lickiewicz, Hughes and Makara- Studzinska (2021), it was stated that mental health care in Poland had been found to lag behind other countries and the use of coercive measures was found to be used on a regular basis. The number of researches conducted in Poland was scant in relation to the treatment of psychiatric patients and the opinion of Polish psychiatric nurses with respect to aggression was not found. The use of the Attitude Toward Aggression Scale (ATAS) in the Polish context help in serving as an instrument that allows in understanding the Polish nurse's attitude toward aggression. It has been found that negative attitudes have been found that affect aggression. (Ortega-Baron *et al*. 2017). As per the research, it can be found that in Poland, the site and mode of patient treatment did not change much in the past 75 years irrespective of the fact that there has been therapeutic development on a worldwide basis. Thus, there is less information in relation to the attitude of nurses toward aggression in a psychiatric setting in the country and there were no instruments that help in measuring it.. The implication for practice involves the development of a Polish version of ATAS, which was valid and reliable in nature. Thus, this help in measuring the attitude of nurses towards aggression which was not possible before. As per the baseline data obtained, the determination of the effects of educational efforts, in this case, can be done.

The exercises identified with hostility by customers or patients is expressed to be a piece of the typical working day for practically all medical services representatives. The investigation directed by Schablon et al. (2018) includes a target to lead an overview to examine the nature and recurrence of brutality and the method of taking care of the forceful conduct by the offices the board. The utilization of cross-sectional examination was finished utilizing 201781 distinctive medical services offices and 1984 workers were thought about. The animosity was discovered to be experienced in a more successive way in medical clinics and private consideration homes. 33% of the members had felt that there was an undeniable degree of stress because of such episodes. Thus, it is significant for the work environment to get ready in a viable way; in any case, this aids in a decrease of apparent pressure odd apportion. Viciousness and hostility were discovered to be normal for this situation (Estévez Lópe, Moreno and Jiménez 2018). The medical care offices have an increment in putting forth an attempt to address the issue and the rising mindfulness may prompt higher episode detailing rates in such cases. The readiness and utilisation of an open methodology in the offices may positively affect the inclination identified with work capacity and stress. It helps in the evaluation of aggression and the factors affecting it.

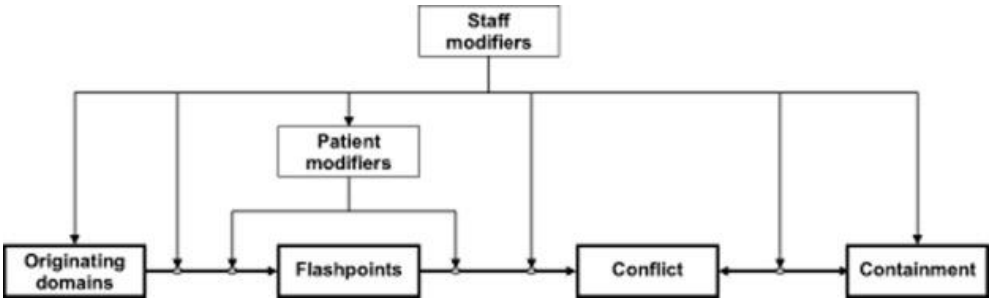
The impact on cognitive, emotional and social function and abilities are affected due to the issues in mental health (Farrell, Thompson and Mehari 2017). The area of risks that need to be considered while dealing with people with mental health issues includes danger, mental instability, suicidal tendency and vulnerability. From the study, it was found that violence within the mental health services is found to be a challenging interplay that interacts with clinical, historical, dispositional and contextual factors. The use of effective risk management is found to be important in offering better mental health services and the risk cannot be eliminated in a complete manner. Thus, it can be minimised using proper procedures that allow in measuring and working with risk. The gap in quality is a significant aspect in this case and thus, it has been suggested that enhancing risk management need to be achieved by the development of a proper learning environment and implementation of an evidence-based and patient-centric approach (Orue and Calvete 2018). In this case, mental health providers can develop prioritised to create a safer, timely, effective and efficient care service to a diverse mental health population.

2.3.2 Impact of violence and aggression on nurses

A similar study that was conducted by Pazvantoğlu et al. (2011) stated that the way of patient aggression is being perceived affect the nurse's behaviour and attitude toward patients. The study was conducted where a cross-sectional and descriptive study was done to assess the method of working of medical attendants in college clinic to get animosity and the factors that influence the discernment. It was found that the nurse in the study had perceived patient aggression to be dysfunctional in nature. The nurses who have been exposed to patient aggression in their career have regarded it to be dysfunctional. The older, more professional and experienced nurses and who have worked more in their respective department were found to have less perception of aggression as being functional than others. Therefore, professional fatigue and burnout are considered to play a major role in this case.

Patient aggression can occur due to a number of factors. The most significant factor includes crowded wards, an uncertain environment of communities and the behaviour of staffs. There is some link between the nurse's attitude toward patients who are violent and behaviour factors in order to deal with such patients. According to the study conducted by Avander et al. (2016), attitude toward violent and aggressive patients is considered as a tradition of toughness, or the staffs consider the origin of aggressive as an impact of behaviour towards such patients. The study has stated that professionals are likely to respond to violence in a permissive manner in order to take into consideration the aggressive behaviour to be constructive in nature in such situations.

According to Pelto-Piri, Warg and Kjellin (2020), the internal model is associated with factors that are linked with patients. Mental issues such as schizophrenia and other psychoses are considered major predictors of inpatient aggression. The factors that are stated to be in conjunction with that of mental illness include demographic, substance abuse and previous history of violence. The use of Safewards model, which is a comprehensive model that includes internal factor and external factors to address the issues related to the patient, patient characteristics, staff team, regulatory framework, stressor and physical environment. The most fundamental type of the Safewards Model is appeared in Fig. 1, which sums up the variables that impact the paces of contention and regulation in wards and clarifies why a few wards have substantially more clash and control than others. The terms in the model have the accompanying implications:



The challenges that are associated with these factors are responsible for causing flashpoints, leading to containment and triggers conflicts. This, Safewards model can be suggested as a way that the staffs can use to prevent the challenges from rising. Six areas distinguish the vital impacts over struggle and control rates: the patient local area, patient qualities, the administrative system, the staff group, the actual climate and outside medical clinic. The furthest ring sums up the critical highlights inside those spaces that can lead to struggle and regulation occasions. The following ring demonstrates the patient modifiers, what patients can do together that impacts the manner by which the highlights of the six spaces give or don't bring about struggle and control occasions. The following ring demonstrates the staff modifiers likewise. Where bolts exist between this ring and the outmost one, they demonstrate that staff additionally have the ability to straightforwardly adjust or change the highlights of the spaces to diminish the danger of contention or control occasions. The deepest ring distinguishes the flashpoints most firmly identified with the areas inside which they sit, flashpoints being those occasions or social conditions that are destined to trigger a contention or regulation occasion in the exceptionally present moment. Struggle and regulation are at the focal point of the model, connected by a bidirectional bolt addressing the way that while struggle can trigger control, control use would itself be able to trigger clash.

2.4 Gaps in Literature

For effectively assessing the perception and attitude of nurses towards violence and aggression, the nurses need to think of the situation when such an incident occurs. Moreover, it can be stated that nurses need to change their negative attitude toward violent patients. Despite extensive studies, there is a lack of research on nurse's perspective on violence and aggression in a mental health setting, particularly in a variety of settings. Thus, this is the gap in literature as it was not found in previous studies. It can be stated that previous studies focused on the prevalence and consequences related to aggression and violence among mentally ill patients however, the attitudes of nurses in relation to such patients were unclear and there is scant research that addressed the issue in an appropriate manner. Therefore, this study aims to understand and explore the perception as well as the attitude of nurses toward violent and aggressive patients. Moreover, it can be found that studies previously conducted were based on a qualitative and quantitative systematic review that offered outdated data on this topic. In order to gain a recent understanding, it was important to conduct a primary study that explores the topic in an effective manner. Therefore, the particular research involved a cross-section study that specifically included subjects in order to understand this aspect.

2.5 Conclusion

After the completion of the literature review, it can be concluded that an in-depth and vivid understanding of the research topic was attained. The previous studies focused on knowing the effects, outcome and incidence of violent and aggressive patients in the mental health setting. It was found that there were many incidents of aggression and violence that occurred due to internal patient factors. There are various effects of such incidents that mainly include physical and psychological consequences. These are responsible for limiting satisfaction level, improved health status and performance of nurses over a longer term. From the previous studies that have been conducted with respect to the research topic, it can be stated that the impact of such incidents is detrimental to the wellbeing of nurses and the negative outcome is obtained on an overall basis.

2.6 Research Hypothesis

Null hypothesis: There is no perception among nurses towards aggression and violence in or male staff have more good attitude than female.

H1: Nurses have perception towards aggression and violence in or male staff have more good attitude than female.

III. METHODOLOGY

3.1 Research Approach and Study Design

The research objective is to assess nurses' perception and attitude regarding aggression and violence exhibited by patients in Mental Health Service in Hamad Medical Corporation (HMC). A cross-sectional research design was applied to assess nurses' perceptions and attitudes regarding aggression and violence exhibited by patients in Mental Health Service. A cross-sectional research design fits the study purpose as this observational study helps measure subjects' outcome and the exposure to the risk factors in focus (Zangirolami-Raimundo et al., 2018). Setia (2016) has defined the major advantages of a cross-sectional research design. First, a retrospective study is less expensive compared to a prospective study. The current study does not have financial support. Second, the application of this research design indicates the prevalence of outcomes for the development of a cohort study (Munnangi & Boktor 2020). Third, the design is useful for public health planning, as the study outcomes may be used for the development of future training aimed at improving the relationships between patients and nurses in the working environment (Setia, 2016). The research findings will be used for the development of the training strategy for the studied environment.

The post-positivist paradigm has been applied in the research. The main idea of the post-positivist paradigm is that reality is imperfect, and it requires studying and further understanding through human behaviour (Kivunja & Kuyini 2017). This paradigm fits the research strategy purpose. Each of the subjects in the flow of the study will have to respond to the survey items resorting to personal perception and vision of the issue. The survey is chosen because it helps collect numerical data from a large sample. The choice of a quantitative research is justified by the opportunity to generate numerical data that is easy to interpret. Moreover, numerical data helps quantify attitudes, opinions, and behaviours to generalize the data. The research assumes that the respondents give fair answers and do not confuse the responses. The selected research design fits the selected methodology to conduct research and obtain the required findings.

3.2 Research Setting

All the nurses in Mental Health Service in Hamad Medical Corporation (HMC) were invited to participate in the questionnaire. The choice of one particular setting helped reduce the bias related to the environment.

3.2.1 Population

The researcher recruited the subjects ensuring that they were eligible for the study applying inclusion and exclusion criteria. Moreover, the researcher was responsible for explaining the idea of the study and the expected outcomes to potential participants (Barrow et al., 2020), selecting a suitable sample based on the study objectives and plan (Taherdoost 2016), gaining informed consent, maintaining ethical standards (Resnik 2020), and retaining participants until the study was completed. These are the key factors required for performing a good study.

3.2.2 Sampling

A purposive sampling method was applied in the research. The choice of this non-random sampling strategy is justified by the research purposes; there is a need to study nurses' perceptions. Therefore, there were specific criteria required to ensure that research was possible. Etikan et al. (2016) have defined the fact that the target population has the required qualities is a reason to choose a purposive sampling method. The unwillingness to participate and the duration of work less than 3 months were the exclusion criteria. The sample was invited to take part in the study through emails.

3.2.3 Sample Size

Initially, all nurses working in the setting were invited to take part in the research. A sample size of 382 nurses working in the Mental Health Service was approached to participate in the study. The inclusion criteria were easy access to subjects, geographical location, availability, and even the willingness to take part in the study (Jager et al., 2017). Furthermore, the availability and willingness to take part in the study were other criteria for inclusion. Staff, charge, and head nurses working in the Mental Health Service were invited to take part in the study. In-patient, community, and out-patient nurses were recruited for the study.

3.3 Data Collection Instruments

The Perception of Aggression Scale Short (POAS-S) Version Questionnaire (Needham et al., 2005b) and the Impact of Patient Aggression on Carers Scale (IMPACS) (Needham et al., 2005a) are the instruments for data collection applied in the research. The permission for using the scales was obtained from the author Dr. Ian Needham by official email. The scale resorts to 5 points Likert scale from 1 (strongly agree) to 5 (strongly disagree). Each subject has to rate the statement depending on their perception and experience (Palmstierna & Barredal 2006). The POAS-S has factors representing patient aggression in positive or negative phenomena sharing nurses' attitude to patients' aggression. IMPACS consists of eight statements nurses have to assess reporting about their behavioural patterns in different situations resorting to 5-points Likert scale from 1 (never) to 5 (always) addressing their actions of how they deal with patients' aggression. The questionnaires are developed to ensure that the subjects may easily respond to the survey questions and return the questionnaires within the set time.

3.3.1 Validity and Reliability of Tools

Needham et al. (2004) have tested the validity and reliability of the shortened version of POAS questionnaire having selected 12 items of the original 32 with the highest reliability scores. Needham et al. (2005a) tested validity of IMPACS by means of the investigation of the test–retest stability.

3.4 Data Collection Procedure

Indicative research methods of a questionnaire-based survey analysis have been selected to satisfy the research objective of assessing nursing perception and attitude toward aggression and violence in the working setting. The researcher sent emails to the subjects to obtain their participation for the research. The Email sent with a brief description of the research, benefits, risks and attached with research information sheet. The respondents were offered to fill out informed consent on the survey sheets. Informed consent informed subjects about the purpose of the research and their role in the study with a detailed explanation of the research procedure indicating when, where, how, by whom the research was going to be conducted. The informed consent notified the subjects about privacy, confidentiality, and free will to take part in the research. Respondents had an opportunity to withdraw from the study at any stage of the research without an explanation of the reasons. No risk was associated with the study as no bio-specimens were used in this research. The research did not assume harming consciously while proceeding with the survey. After the consent was obtained, each respondent can continue to start the survey questions online. In case of the respondent did not obtained the consent, will be directed to Thank you page on the online survey. This means of data collection allows reducing time on the research and avoid unnecessary contact in the period of COVID-19 (Hlatshwako et al. 2021). The participants were allowed four weeks to fill out the questionnaire. The follow-up reminders were sent via email every two weeks. Having received the responses, the researcher applied inclusion and exclusion criteria to screen responses for eligibility for the study. The study database was developed with the data obtained from the questionnaire. Online questionnaires were used, and data were coded electronically in SPSS. No personal data were collected from the subjects to eliminate the possibility to identify the respondents with their responses. The survey responses were anonymously gathered using SPSS software for analysis. It is expected that the research outcomes will benefit the development of future training aimed at improving patient and nurse relationships and the working environment.

3.5 Data Analysis

The descriptive analyses will refer to frequency (n) and percentages (%). A 5-point Likert scale is used in both questionnaires, 1 (strongly agree), 2 (agree), 3 (uncertain), 4 (disagree), or 5 (strongly disagree) for POAS-S and 1 (never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (always) for IMPACS. The validity of the research strategy has been confirmed by the validity of the selected instruments for data collection. The research tools measure what they have to measure in the frames of the current study. The reliability of the study has been justified by the consistency of the measurement itself; the same results were obtained from various parts of a survey designed to measure the same aspects.

SPSS software was used for data analysis. The scores were assessed using the Shapiro Wilk test to define whether the population was normally distributed. For not normally distributed data, interquartile range [IQR] was presented to measure statistical dispersion to see the probability of occurrence different possible outcomes. The research will use the hypothesis testing principle for comparing two groups (male vs. female), such as t-test to define a significant difference between the variables. ANOVA test was used for comparing variables with more than two groups (age, education) with the same purpose, to check how one or more factors impact each other by comparing the means of different samples. All statistical analyses were done using SPSS software, and all tests were two-sided, and p-value considered <0.05 as significant. The statistical data was presented in the findings section arranged in tables and visual chats to give a better understanding of the data. The detailed data explanation was provided in the discussion chapter of the research.

3.6 Ethical Considerations

The study will be conducted in full conformance with the principles of the Declaration of Helsinki (World Medical Association 2018) and Good Clinical Practice European Medicines Agency 2002). Ethical strategies and attitudes will be integrated to avoid any complications. HMC and MOPH in Qatar Laws, professional codes, regulations, and best practices adhered to the global clinical trial will be maintained. Informed consent will be sent to the University of Essex IRB committee to get confirmation and support for using ethical research. The permission to conduct a research among nurses in Mental Health Service in Hamad Medical Corporation was also obtained via Ethical approval process through Abhath.hamad.qa website and mental health service research committee.

3.7 Data Management

Data obtained in the flow of the research will be used for the study purposes only. The primary sheets with responses were kept de-identified in a password-protected computer. De-identified data will be stored for 5 years; all the data will be destroyed in 5 years. Only the researcher will control access to the study data. All the collected de-identified data will be used in a form of an analysed set of data without the distribution of separate responses in a public presentation in a form of a published article.

3.7.1 Dissemination of Findings

The copy of the study will be located online in the dissertations' database. The results will be published in the university library and Mental Health service in Qatar. The results will be distributed by means of publishing the data in the International Journal of Mental Health Nursing.

3.8 Conclusion

The chapter has presented the research methodology used in the study, ethical guidelines, and the ways of results dissemination. The further chapter will present the study results obtained through the data collection and analysis strategies discussed in the chapter.

IV. DATA ANALYSIS AND PRESENTATION OF RESULTS OF THE STUDY

4.1. Introduction

The study includes a convenience sample of 199 nursing staff that filled online survey. Data were analysed and presented in appropriate tables and different figures that help the researcher to achieve the objectives of the study.

The study aims to assess nursing staff perception of violence behaviour and their attitude toward aggression that exhibited by mental health patients in HMC.

The results are presented in five sections as follows.

- Demographic characteristics of the nursing staff.
- Nursing staff perception of aggression behaviour.
- Relationship between demographic data of the studied nursing staff and their perception of aggression behaviours.
- Attitude of nursing staff toward violence behaviours of mental health patients.
- Relationship between demographic data of the studied nursing staff and their attitude toward violence behaviours that exhibited by mental health patients in HMC.

4.2. Demographic data of the participants

The demographic data of the participants that included in the study are gender, position, experiences in mental health at HMC, and experience years in mental health, department, and language.

4.2.1 Gender of the participants

Most of the studied participants 142 (71.4%) was male and 57 (28.6%) were female as shown in figure 4.1.

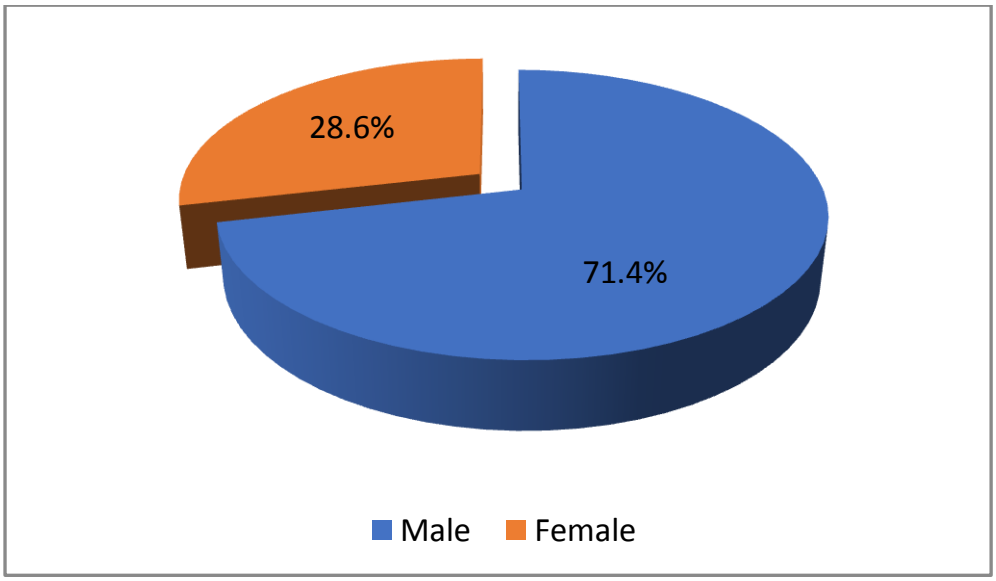


Figure 4.1 Gender of the participants

4.2.2 Nursing position

Nursing staff had different position in nursing; the nursing position indicates whether the nurse was staff nurse, charge nurse, head nurse, nursing supervisor or nursing director. The participants of the study were staff nurse, charge nurse, and head nurse. The majority of the studied nursing staff was staff nurses (81.9%), 25 (12.6 %) of them were charge nurse and 11 (5.5 %) of them were head nurses as shown in figure 4.2.

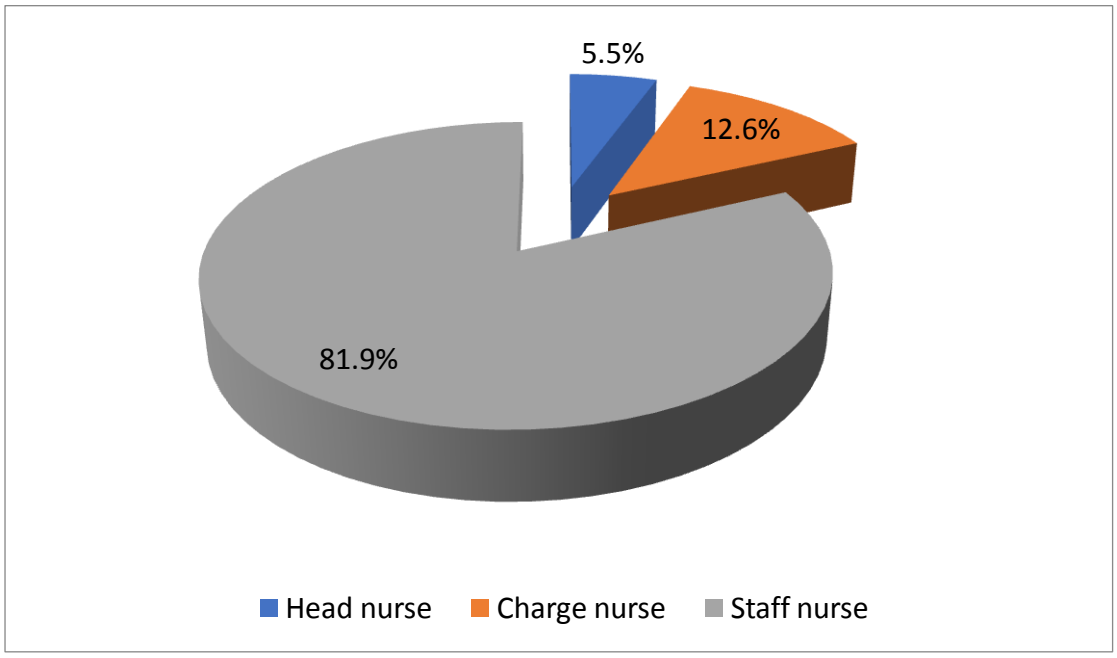


Figure 4.2 Position of the participants

4.2.3 Experience in mental health at HMC, total experience years in mental health.

The participants were asked to select one of the three category of experience years: 0-3 years, 4-7 years, and more than 7 years of experiences. Regarding total experiences of the studied nursing staff half of them (50.3%) had more than 7 years of experience in mental health. Regarding experience in mental health service in HMC, slightly less than half of the participants (47.7%) had 4-7 experience years, 64 (32.2%) of them had 0-3 years of experience, and 40 (20.1%) of the studied nursing staff had more than 7 experience years in mental health service in HMC as shown in figure 4.3.

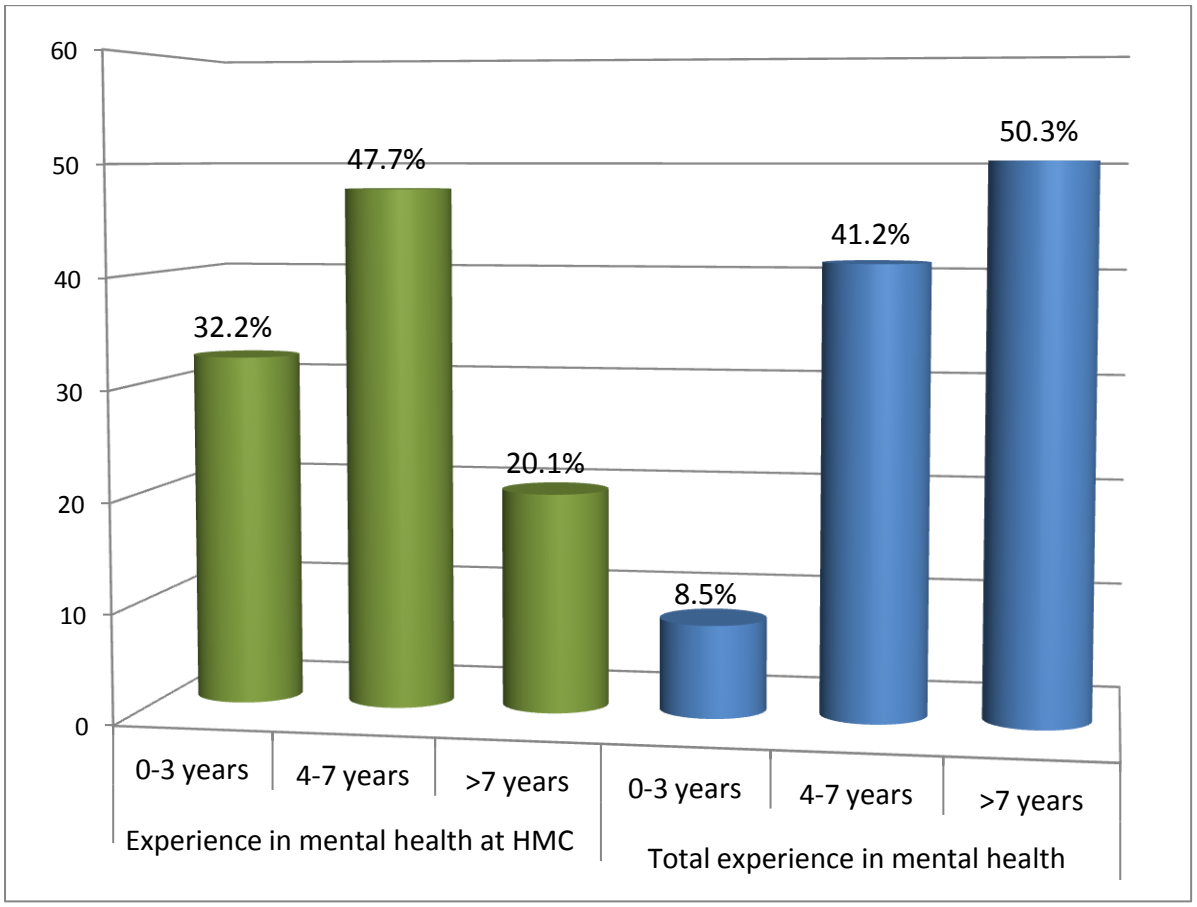


Figure 4.3 Experience years of the participants

4.2.4 Working areas of the participants.

Nursing staff are working in different working area inside and outside HMC. The nursing staff of the current study was working in inpatient, community, and outpatient units and they are Arabic and English native speakers. The majority of the studied nursing staff (71.9%) was working at inpatient units, 37 (16.8%) of them were working in community, and 19 (9.5%) were working at outpatient units as shown in figure 4.4.

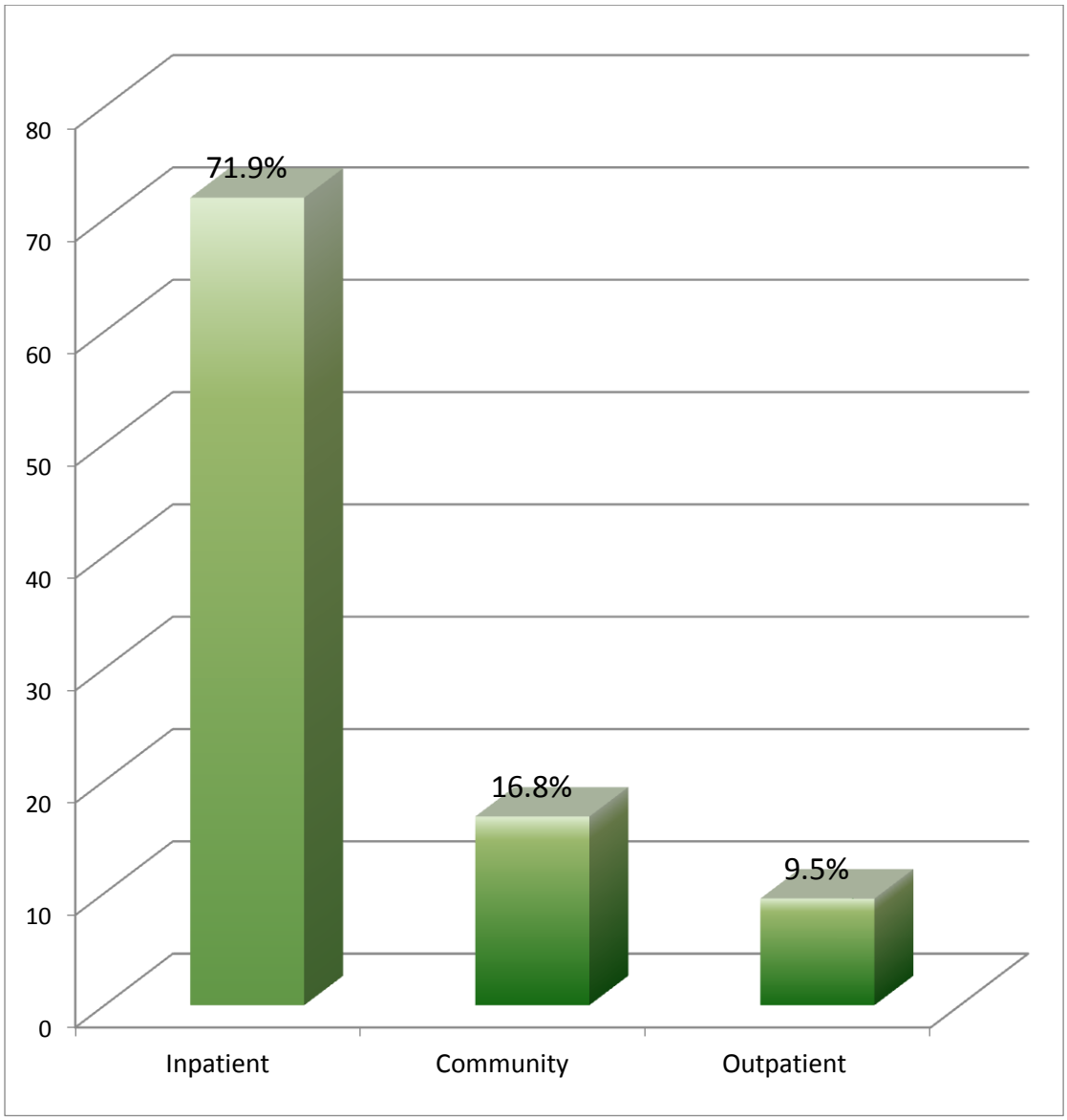


Figure 4.4 Working areas of the participants

4.2.5 Language of the participants.

Regarding the language of the participants, the nursing staff of the current study had different nationality with different speaking languages (native languages). Most of the participants (59.8%) were English speakers and 80 (40.2%) were Arabic native speakers as shown in figure 4.5.

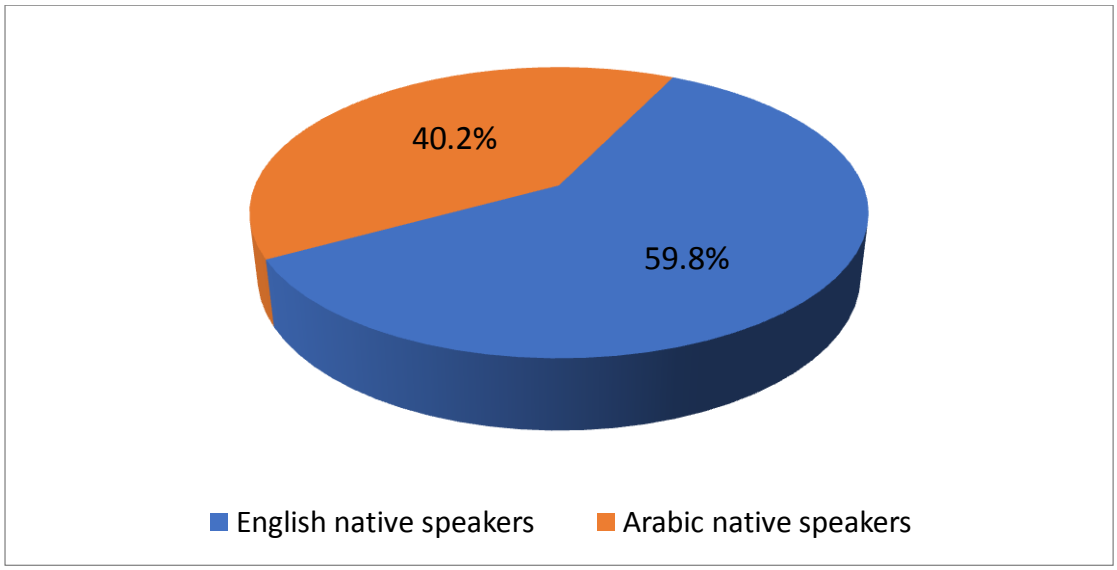


Figure 4.5 Languages of the participants

4.2.6 Nursing staff attendance of PMVA, and refresher training

Nursing staff attended training program as PMVA and refresher training program, the majority of the studied nursing staff (93.0%) had attended PMVA training program in MHS, and 14 (7.0%) of them did not attend PMVA training program. Also, the majority of the studied nursing staff (73.4%) had attended a refresher training program and 26.6% of them did not attend refresher training program. The majority of the studied nursing staff (83.4%) did not attend a refresher training program during last twelve months as shown in figure 4.6.

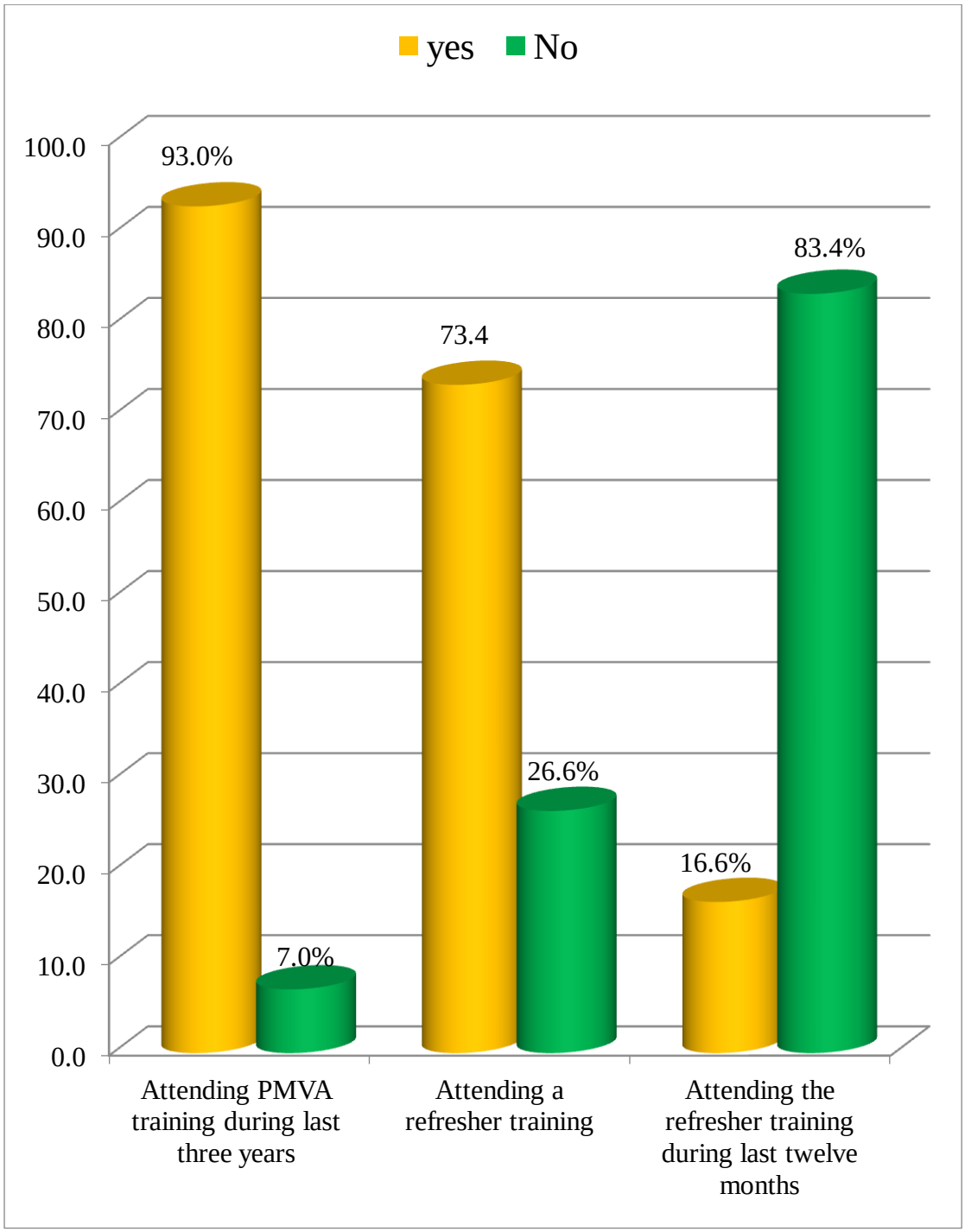


Figure 4.6 Nursing staff attendance of PMVA, and refresher training

4.3. Nursing staff perception of aggression behaviours

4.3.1. Nursing staff perception of aggression as dysfunctional/ undesirable phenomenon

Table 4.1 illustrates the highest mean score among dysfunctional/ undesirable phenomenon of aggression was for aggression is a violent behaviour to others and self-4.51 (SD: 0.64) followed by aggression is hurting others mentally or physically 4.35 (SD: 0.81), any expression that makes someone else feel unsafe, threatened or hurt 4.03 (SD: 0.84), aggression is essentially beating up someone else 3.40 (SD: 1.20), aggression is any action of physical violence 3.95 (SD: 1.02) and aggression is a mean patients use to exercise power over others 3.05(SD: 1.40). The nursing staff perception indicates their agreement about dysfunctional/ undesirable phenomenon of aggression.

Table 4.1 Nursing staff perception of aggression as dysfunctional/ undesirable phenomenon

Aggression is	**Strongly disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly agree**	**Mean±SD**
	N (%)	N (%)	N (%)	N (%)	N (%)	
1. violent behaviour to others and self	0 (0.0)	3 (1.5)	7 (3.5)	75 (37.7)	114 (57.3)	4.51±0.64
2. essentially beating up someone else	12 (6.0)	45 (22.6)	31 (15.6)	73 (36.7)	38 (19.1)	3.40±1.20
3. hurting others mentally or physically	3 (1.5)	3 (1.5)	15 (7.5)	78 (39.2)	100 (50.3)	4.35±0.81
4. any action of physical violence	1 (0.5)	29 (14.6)	15 (7.50	87 (43.7)	67 (33.7)	3.95±1.02
5. a mean patient use to exercise power over others	40 (20.1)	38 (19.1)	25 (12.6)	65 (32.7)	31 (15.6)	3.05±1.40
6. any expression that makes someone else feel unsafe, threatened or hurt	3 (1.5)	10 (5.0)	20 (10.1)	112 (56.3)	54 (27.1)	4.03±0.84

The responses of nursing staff were at five-point Likert-scale ranged from 1 for never / or strongly disagree to 5 for always / or strongly agree. Mean scores were computed for each statement to assess perceptions of the nursing staff about each statement related to studied variables. Mean score computed by adding up the scores of the participants related each statement and dividing the total by the number of participants.

Table 4.2 illustrates the highest mean score among functional/ comprehensible phenomenon of aggression was for aggression is emotionally letting off steam 3.98 (SD: 0.91), followed by aggression helps the nurse see the patient from another point of view 3.77(SD: 1.04), aggression offers new possibilities in nursing care 3.71(SD: 0.93), aggression is an expression of emotions, just like laughing or crying 3.65 (SD: 1.16), aggression is the protection of one's own territory and privacy 3.62 (SD: 1.03), aggression is the start of a more positive nurse-patient relationship 3.28 (SD: 1.16). The nursing staff perception indicates their agreement about functional/ comprehensible phenomenon of aggression.

The nursing staff perception indicates they agree about functional/ comprehensible phenomenon of aggression.

Table 4.2 nursing staff perception of aggression as functional/ comprehensible phenomenon

Aggression is	**Strongly disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly agree**	**Mean±SD**
	N (%)	N (%)	N (%)	N (%)	N (%)	
7. emotionally letting off steam	2 (1.0)	14 (7.0)	29 (14.6)	94 (47.2)	60 (30.2)	3.98±0.91
8. offers new possibilities in nursing care	2 (1.0)	22 (11.1)	45 (22.6)	92 (46.2)	38 (19.1)	3.71±0.93
9. helps the nurse see the patient from another point of view	4 (2.0)	28 (14.1)	26 (13.1)	92 (46.2)	49 (24.6)	3.77±1.04
10. an expression of emotions, just like laughing or crying	8 (4.0)	35 (17.6)	27 (13.6)	78 (39.2)	51 (25.6)	3.65±1.16
11. the protection of one's own territory and privacy	8 (4.0)	25 (12.6)	34 (17.1)	100 (50.3)	32 (16.1)	3.62±1.03
12. the start of a more positive nurse-patient relationship	11 (5.5)	51 (25.6)	36 (18.1)	73 (36.7)	28 (14.1)	3.28±1.16

Table 4.3 illustrates that the mean score of aggression dimensions was 23.29 (SD: 3.44) for dysfunctional/ undesirable phenomenon and 22.02 (SD: 4.58) for functional/comprehensible phenomenon. The nursing staff perception indicates their high agreement about aggression dimensions.

Table 4.3 mean scores of nursing staff perception of aggression behaviours dimensions

Aggression as	**No of items**	**Min-Max**	**Mean±SD**	**Mean/no of items**	**Interpretation**
A. Dysfunctional/ undesirable phenomenon	6	14-30	23.29±3.44	3.9	High
B. Functional/ comprehensible phenomenon	6	11-30	22.02±4.58	3.7	High

There is no contradictory as aggression has two main dimensions, first dysfunctional that means patients' aggression had negative consequences as makes someone feel unsafe, threatened or hurt. Second, functional that means patients' aggression had positive consequences as it can help the nurse see the patient from another point of view. At the same time indicates that nursing staff aware about functional and dysfunctional phenomenon of aggression

4.4. Relationship between nursing staff perception of aggression behaviours and their demographic characteristics.

Table 4.4 illustrates there was no statistically significant relationship between aggression dimensions (dysfunctional/ undesirable phenomenon and functional/comprehensible phenomenon) and demographic characteristics of nursing staff except experience years in mental health service at HMC, especially between nursing staff who having experience years between 0-3 years and 4- 7 years and speaking language.

Table 4.4 Relationship between nursing staff perception of aggression behaviours, and their demographic characteristics

Variables	Total		Dysfunctional/ undesirable phenomenon	Functional/ comprehensible phenomenon
	N	%	Median (IQR)	Median (IQR)
Gender				
▪ Male	142	71.4	23.0 (4.0)	22.5 (6.0)
▪ Female	57	28.6	23.0 (4.0)	22.0 (5.0)
z/p value			1.02/0.31	0.90/0.37
Position				
▪ Head nurse	11	5.5	24.0 (7.0)	22.0 (7.0)
▪ Charge nurse	25	12.6	21.0 (4.0)	21.0 (5.0)
▪ Staff nurse	163	81.9	23.0 (4.0)	23.0 (6.0)
KW/ p value			6.12/0.05	0.88/0.65
Experience in mental health service at HMC				
▪ 0-3 yeas	64	32.2	24.0 (5.0)a	20.0 (7.0)a
▪ 4-7 years	95	47.7	22.0 (4.0)a	24.0 (6.0)a
▪ > 7 years	40	20.1	24.0 (5.8)	22.0 (6.0)
KW/ p value			9.38/0.009**	9.94/0.007**
Total experience years in mental health service				
▪ 0-3 yeas	17	8.5	23.0 (5.50)	23.0 (6.5)
▪ 4-7 years	82	41.2	24.0 (5.0)	21.0 (7.0)
▪ > 7 years	100	50.3	23.0 (4.0)	23.0 (6.0)
KW/ p value			3.27/0.20	2.77/0.25
Department				
▪ Inpatient	143	71.9	23.0 (5.0)	22.0 (7.0)
▪ Community	37	16.8	23.0 (4.5)	23.0 (5.0)
▪ Outpatient	19	9.5	24.0 (6.0)	23.0 (5.0)
KW/ p value			0.02/0.99	2.71/0.26
Native language				
▪ Arabic	80	40.2	23.0 (4.0)	24.0 (5.0)
▪ English	119	59.8	24.0 (5.0)	20.0 (6.0)
z/p value			2.78/0.005**	5.05/0.000**

* Statistically significant at p <0.05/ ** statistically significant at p <0.01

(a) letter indicates significant p-value by post hoc Mann-Whitney U test (p =0.002).

Table 4.5 illustrates there was no statistically significant relationship between overall dysfunctional/ undesirable phenomenon of aggression among nursing staff and attending PMVA, and refresher training. But there was statistically significant relationship between overall functional/ comprehensible phenomenon of aggression among nursing staff and attending refresher training.

This relationship means there is statistically significant difference between the nursing staff who attended refresher training and other who did not attend refresher training, this difference mean nursing staff who attended refresher training be aware of /and perceive functional/ comprehensible phenomenon of aggression.

Table 4.5 Relationship between attending training and nursing staff perception of aggression phenomenon

Training programs	Total		Dysfunctional/ undesirable phenomenon	Functional/ comprehensible phenomenon
	N	%	Median (IQR)	Median (IQR)
Attending PMVA training during last three years				
▪ Yes	185	93.0	23.0 (5.00	23.0 (6.0)
▪ No	14	7.0	22.5 (7.8)	21.5 (5.5)
z/p value			0.63/0.53	1.34/0.18
Attending a refresher training				
▪ Yes	146	73.4	23.0 (5.0)	23.0 (6.3)
▪ No	53	26.6	23.0 (5.5)	21.0 (4.0)
z/p value			0.23/0.81	2.71/0.007**
Attending the refresher training during last twelve months				
▪ Yes	33	16.6	23.0 (6.0)	23.0 (5.0)
▪ No	166	83.4	23.0 (5.0)	22. (6.0)
z/p value			0.15/0.88	0.79/0.43

PMVA: Prevention and Management of Violence and Aggression

** Statistically significant at p ≤0.01

4.5. Nursing staff attitude toward violence behaviour of mental health patients

Table 4.6 summarizes the highest mean score related items of impairment of relationship between patient and career was for experiencing a disturbance in the relationship to the patient 2.47 (SD: 1.02) followed by feeling insecure at work 2.41(SD: 1.01), avoiding contact with this patient 2.38(SD: 1.06), and i feel insecure in working with the patient 2.35(SD: 0.99). The mean scores of the items of impairment of relationship between patient and career indicate seldom and sometimes impaired from nurses' perspectives.

Table 4.6 nursing staff attitude of impairment of relationship between patient and career dimension of violence

I. Impairment of relationship between patient and career subscales	**Never** N (%)	**Seldom** N (%)	**Sometimes** N (%)	**Often** N (%)	**Always** N (%)	**Mean±SD**
I experience a disturbance in the relationship to the patient	40 (20.1)	61 (30.7)	66 (33.2)	29 (14.6)	3 (1.5)	2.47±1.02
I avoid contact with this patient	47 (23.6)	67 (33.7)	51 (25.6)	31 (15.6)	3 (1.5)	2.38±1.06
I feel insecure at work	41 (20.6)	67 (33.7)	64 (32.2)	23 (11.6)	4 (2.0)	2.41±1.01
I feel insecure in working with the patient	42 (21.1)	71 (35.7)	67 (33.7)	12 (6.0)	7 (3.5)	2.35±0.99

Table 4.7 illustrates adverse moral emotions dimension, the highest mean score was for feeling sorry for the patient (3.01±1.01), followed by having a guilty conscience towards the patient (2.29±0.97) and having feelings of being a failure (1.89±0.85). The mean scores of the items of adverse moral emotions dimension of violence indicates sometimes nursing staff feel sorry for the patient, and seldom they have a guilty conscience towards the patient, and they never have feelings of being a failure, and feel ashamed of my work.

Table 4.7 nursing staff attitude of adverse moral emotions dimension of violence

I. Adverse moral emotions subscales	**Never** N (%)	**Seldom** N (%)	**Sometimes** N (%)	**Often** N (%)	**Always** N (%)	**Mean±SD**
I have a guilty conscience towards the patient	52 (26.1)	53 (26.6)	82 (41.2)	8 (4.0)	4 (2.0)	2.29±0.97
I feel sorry for the patient	17 (8.5)	38 (19.1)	82 (41.2)	50 (25.1)	12 (6.0)	3.01±1.01
I have feelings of being a failure	73 (36.7)	83 (41.7)	35 (17.6)	7 (3.5)	1 (0.5)	1.89±0.85
I feel ashamed of my work	135 (67.8)	41 (20.6)	19 (9.5)	3 (1.5)	1 (0.5)	1.46±0.77

Table 4.8 Regarding adverse feelings to external sources dimension, the highest mean score was for feeling that I have to deal with societies' problems (2.67±1.13) followed by having feelings of anger towards the clinic (2.10±0.90). Theses mean score indicates the studied nursing staff seldom felling that they have to deal with societies' problems and feelings of anger towards the clinic they are working in.

Table 4.8 nursing staff attitude of adverse feelings to external sources dimension of violence

I. Adverse feelings to external sources subscales	**Never** N (%)	**Seldom** N (%)	**Sometimes** N (%)	**Often** N (%)	**Always** N (%)	**Mean±SD**
I feel that I am having to deal with societies' problems	28 (14.1)	68 (34.2)	61 (30.7)	25 (12.6)	17 (8.5)	2.67±1.13
I have feelings of anger towards the clinic I am working in	55 (27.6)	83 (41.7)	51 (25.6)	7 (3.5)	3 (1.5)	2.10±0.90

Table 4.9 illustrates that mean score of overall violence perception was 23.03 (SD: 5.97). The mean scores of impairments of patient and career relationship, adverse moral emotions, and adverse feelings to external sources were 9.60 (SD: 3.34), 8.66 (SD: 2.20), and 4.77 (SD: 1.67) respectively. The highest perception of violence dimensions was for impairment of patient and career relationship followed by adverse feelings to external sources, and adverse moral emotions. The overall perception of violence behaviours and its dimensions were at low level.

The overall perception of violence behaviours and its dimension indicate there is low degree of impairment of relationship between patient and career, adverse moral emotions, adverse feelings to external sources in addition to overall perception of violence behaviour among the studied nursing staff also with a low degree.

Table 4.9 Mean scores of attitudes of nursing staff toward violence behaviours

Subscales of attitude toward violence	No of items	Min-Max	Mean±SD	Mean/no of items	Rank	Interpretation
I. Impairment of relationship between patient and career	4	4-20	9.60±3.34	2.40	1	Low
I. Adverse moral emotions	4	4-14	8.66±2.20	2.17	3	Low
I. Adverse feelings to external sources	2	2-10	4.77±1.67	2.39	2	Low
Overall attitude toward violence	10	10-42	23.03±5.97	2.30		Low

4.6. Relationship between demographic characteristics of nursing staff and their attitude toward violence behaviour

Table 4.10 illustrates there was no statistically significant relationship between overall violence perception and demographic characteristics of nursing staff except experience years in mental health service, especially between nursing staff who having experience years between 4-7 years and more than 7 years.

Table 4.10 Relationship between demographic characteristics and overall nursing staff attitude toward violence behaviours.

Variables	Total		Overall attitude of violence behaviour	
	N	%	Mean±SD	tor f /P
Gender				
▪ Male	142	71.4	22.67±6.11	1.35/0.18
▪ Female	57	28.6	23.93±5.57	
Position				
▪ Head nurse	11	5.5	18.82±5.78	2.96/0.05
▪ Charge nurse	25	12.6	23.32±5.81a	
▪ Staff nurse	163	81.9	23.27±5.93a	
Experience in mental health at HMC				
▪ 0-3 yeas	64	32.2	23.81±7.45	0.85/0.43
▪ 4-7 years	95	47.7	22.76±4.75	
▪ > 7 years	40	20.1	22.43±5.96	
Total experience years in mental health service				
▪ 0-3 yeas	17	8.5	21.82±7.40	9.06/0.000**
▪ 4-7 years	82	41.2	25.10±5.61 (a)	
▪ > 7 years	100	50.3	21.54±5.53 (a)	
Department				

▪ Inpatient	143	71.9	22.79±5.88	
▪ Community	37	16.8	23.86±7.13	0.48/0.62
▪ Outpatient	19	9.5	23.21±3.97	
Native language				
▪ Arabic	80	40.2	22.66±5.79	0.71/0.48
▪ English	119	59.8	23.28±6.10	

*****Statistically significant at p <0.01) / (a) letter indicates significant p-value by post hoc bonferroni test (p =0.000).

Table 4.11 there was statistically significant relationship between overall perception of violence among nursing staff and attending PMVA training during last three years, and refresher training during last twelve months.

Table 4.11 Relationship between attending training and overall nursing staff attitude toward violence behaviours

Variables	Total		Overall attitude toward violence behaviour	t/p value
	N	%	Median (IQR)	
Attending PMVA training during last three years				
▪ Yes	185	93.0	23.39±5.80	
▪ No	14	7.0	18.21±6.36	3.20/0.002**
Attending a refresher training				
▪ Yes	146	73.4	23.19±5.69	
▪ No	53	26.6	22.62±6.74	0.57/0.56
Attending the refresher training during last twelve months				
▪ Yes	33	16.6	20.82±6.72	
▪ No	166	83.4	23.47±5.73	2.36/0.02*

*****Statistically significant at p <0.05)/ ******statistically significant at p <0.01)

IV. DISCUSSION OF RESULTS AND FINDINGS

5.1 Demographic features of the participants

In the results it has been viewed that majority of the nurses were males 71.4% while the female nurses were 28.6%. The selection bias is seen where more males compared to females. It demonstrated that MHS appoint more male staff due to the cultural perspective, as they are more capable of dealing with the male patients' aggressive situations and it is easy to deal with aggressive patients (Mott et al., 2009). It also showed the different nurses positions Head nurses, charge nurses and staff nurses (Ridenour et al, 2015). The head nurse handles the violent situations and pressure from the aggressive patients more easily, that gives strength to the staff nurses to deal with violent behaviours and bad working situations (Angland et al., 2014). But according to the violence behaviour score it has been seen that head nurse scored lower on the overall attitude of violence.

5.2 Experience of nurses in mental healthcare

Mental Health nurses should have the experience to tackle the situation (Pich et al., 2010). The results showed the length of experience varies in the mental health, the more the mental healthcare experience they have, the more they are capable of delivering the best care to the disturbed patients. Patients with mental care are violent and aggressive and an intense care is required to them for their fast delivery (Najafi et al., 2018). patients with mental problems become aggressive and violent and do not get agree to take medications or other healthcare treatment (Farrell, 2017). That is why, experienced nurses are often employed more to deal with patients and to deliver healthcare and patient handling techniques to other nurses who are not much experienced in mental care (Pich et al., 2010).

5.3 Position of the Working Staff

It has been noted through the study results that nurses of HMC worked for inpatients, outpatients, and community units. the patient's family sometimes want to take patient home, so, they demand a community mental health nurse for the patient service (Najafi et al., 2018) so all patients benefited from the healthcare facilities by the staff nurses (Sato et al., 2013). Though most of the nurses of HMC worked as inpatient units because inpatient units have Acute patients' cases, and they require healthcare services and treatment for greater

period of time. Moreover, nurses' number is usually increased in the inpatient units because of the shift's duty. The shifts of the nurses usually range from 8 to 12 hours in HMC (Ridenour et al, 2015).

5.4 Language

Language plays vital role when dealing with patients. The greatest number of nurses are foreigners, they came from Arab countries and non-Arab countries. Thus, healthcare centres appoint nurses who is experienced in English language. Because English is the standard and international language that is spoken in every region of the world, and it is the best mode of communication when dealing with foreigners (Sato et al., 2013). Healthcare centres teach Arabic language for non-Arabic speaker because the Citizen of Qatar speaks Arabic language. Language courses must be taught that helps the nurses to deal with citizens. The results of the study showed that 59.8% of the nurses were English speakers and 40.2% were Arabic speakers. The number of English speakers' nurses exceeds because in many Arab countries, English is also the second national languages and many people from foreign countries come to live in Arab countries so their mode of language in English. Though it helps to treat non-Arab patients who cannot understands Arabic (Najafi et al., 2018).

5.5 Training of the Nursing Staff

PMVA training is mainly provided to the healthcare workers and this training is mandatory as it deals the staff to deal with violence and aggression (Mott et al., 2012). Mental healthcare of nurses is very important as it allows the nurses to deal with abusive and violent situations and helps them to stay relaxed and focused to their work (Mott et al., 2009). PMVA training includes: Communication, conflict management and De-escalation skills. The results had demonstrated that about 93.0% of the nursing staff had the PMVA training that ensures the mental health of nursing staff as well as make them able to deal with violent situations. (Mott et al., 2012). Refresher training program is a training program for the existing employees to train the employees with modern skills and process that enhance the quality of job performance. (Ridenour et al, 2015).

It has been noted that 73.4% of the employees attended refresher training program and were able to work efficiently because of the modern and developed skills they learned through refresher training. The data suggested that participants with different training maintained themselves well and they perceive aggression as a normal phenomenon suffered by patients. Because the differential trainings have provided them with experience to tackle the hard situations. Thus, the PMVA training and the refresher training provides basic fundamental training to the nurses (Avander et al., 2016).

5.6 Aggression and Violence by patients

Aggression is an undesirable phenomenon that cause emotional and physical harm and danger to the others. It includes physical assault and abuse and verbal abuse. Aggression form also involves harming and forced or illegal acquisition of personal property (Hodge and Marshall, 2007). Social boundaries are violated by aggressive behaviours. Mean score (4.51 with SD 0.64) demonstrated that aggression is violent form of behaviour. While mean score (4.35) presumed that aggression is physical or mental hurting to others. 4.03 score showed that people see aggression as feeling unsafe. 3.40 mean score mean score showed that aggression means beating up of individuals. Different individuals see aggression differently. Some characterized aggression as a mean of physical assault while some feel unsafe or physically or mentally disturbed by the phenomenon. PMVA training and refresher training is usually provided to the paramedical staff including nurses to deal with aggression from patients and other problems of healthcare centres (Blando et al., 2013).

5.7 Aggression as a positive phenomenon taken by nurses

Aggression is a parameter that demonstrates that the patient is suffering is high level of mental trauma and he clearly needs medical and healthcare assistance to deal with aggression and anxiety (Pich et al., 2010). Nurses and other paramedical staff observe the aggressive behaviour of patients and discuss their mental conditions with doctors and physicians and help the patients in providing them with immediate treatment (Hodge and Marshall, 2007). It has been observed that relaxation therapies, engaging the patients in activities they like, talking to them, listening to their problems, taking them for walk helps to decrease the aggressive behaviour of patients and many nurses of the current study that is mean score 3.77 with SD: 1.04 demonstrated that aggressive behaviours of patients helps the nurses to observe and serve the patients from another point of view; nurses see the patients as the require the utmost help of nurses and clinicians because they are fighting with depression and anxiety that has made them aggressive (Pich et al., 2010). Some nurses presumed that aggressive behaviour of patients is a form of self-defense and self-protection because they require care and protection from metal deterioration. Or maybe they suffer from any other mental traumas like bad past experiences, life threats that made them aggressive (Hopkins et al., 2018). Participant nurses of the current study demonstrated that aggression is the dysfunctional and undesirable phenomena; Mean±SD: 23.29±3.44.

The results, however, showed that there was no significant relationship between the demographic features and aggression dimensions except for the experience of nursing staff. The experience of mental healthcare play significant role in the aggression evaluation of patients as sufficient amount of experience of mental healthcare is required to tackle the aggressive behaviours of patients (Angland et al., 2014). And the language that also played important role in dealing with aggressive tone of the patients (Irwin, 2006).

5.8 Aggression and Working conditions of the nursing staff.

Results depicted that career of nurses and nurses endangers as the aggressive behaviour of the patients disturbs the working conditions of the nurses. Nurses observed that they felt insecure at the work. And nurses avoided the contact with the patients and also felt insecure due to the aggressive tone of the patients. Patients may use violent tactics with the nurses. Though the result showed impairment of the relationship between the career of nurses and patients' behaviour.

5.9 Moral Emotional Values by nursing staff

Moral emotional values were also discussed as the nurses become emotionally attached to the patients. Because they feel sorry for the patients because they were mentally unstable and cannot function properly on their own (Blando et al., 2013). And nurses also presumed that patients are failed and mentally ill (Hopkins et al., 2018). They might feel guilty and conscience towards the mentally disturbed patients, Nursing staff is devoted to their role and they might feel bad for the mentally ill patients that they cannot control their aggressive behaviour and they require medical assistance in dealing with the bad days of their lives (Irwin, 2006) Nurses are trained in a way that they should take care of the patients because patient is at their door for help. The patient is unable to take care of himself and requires help from the nurses (Irwin, 2006). Rehabilitation is the form of extensive care that restores and enhances the functional ability of the patient and enhance the quality of life in a manner that patients with aggressive behaviours must learn to calm down their selves and must involve in practices that stablises their mental health (Najafi et al., 2018). This can be done by the extensive care of the nurses as they teach the patients how to be themselves, and how to remain strong. Nurses teach the patients through verbal support as a part of training of nurses, that aggressive behaviour makes a person weak and not being able to love (Verhaeghe et al., 2016). So, patients recognises that nurses are taking care of them and they try to change their behaviour. Soft verbal skill by nurses improves the aggressive behaviour of patients. This will speed up the recovery of the patient. And the other patients will also learn, and they also want themselves to recover fast (Hodge, and Marshall, 2007). Rehabilitation therapy of one patient by nurses have tremendous and positive effect on other patients (Irwin, 2006).

5.10 Frustration Feeling in the Nursing staff

Nursing staff is usually at high risk of feeling frustrated because all the time they are dealing with different types of individuals (Blando et al., 2013). Some individuals are compromising while other are totally aggressive and they want first level of treatment. The duty of nurses is already very tough as they have to take care of several individuals at one time. Some patients need different kinds of therapies, some need extensive care, some are at rehabilitation therapy (Hopkins et al., 2018). Nurses must make patients agree to take the healthcare treatment and to take the medications over time (Angland et al., 2014). According to the right of the patients, patient rights and freedom is respected but in cases where there is fear that patient will might provide danger to himself, he must be restrained and refrained. Nurses play important duty as they have give medicines to the patients. Aggressive patients do not listen to the nurses and do not take their medications. So, nurses have to deal with such aggressive behaviour of the individuals and must feed them with their medications (Hodge and Marshall, 2007). This is a hard job and must requires patience. The level of patience is increased and enhanced in the nurses through PMVA trainings which help and teach the nurses to tackle the hard parts of their jobs (Mott et al., 2012). It may happen that the nurses leave the hospitals and join other healthcare center that provides him/ her with better working environment (Hodge and Marshall, 2007). This cause both reduction in the quality of services provided to the patients as well as the reduction in the number of staff that again put risk to the working conditions of other working staff (Duxbury and Whittington, 2005).

The research demonstrated that PMVA training as well as the refresher training showed positive significant relationship between overall perceptions of violence among nursing staff. As the training play important role in maintaining the working conditions of the nursing staff with regard to the aggressive behaviour by the patients (Alkorashy and Al Moalad, 2016). The study will thus be helpful in creating the awareness in the healthcare centers that they must provide necessary training to the working staff to avoid the future implications (Edward et al., 2014).

5.11 Working Environment of healthcare centers.

Secondly, it was noted due to the research that nurses felt anger towards the clinic they are working in. This often happens when the rights of the nurses are not protected. And they are provided with extra working hours and a high amount of pressure on the nurses (Ridenour et al., 2015). Moreover, in extreme cases, the nursing staff face shortage, and a single nurse look after many people, more than of his/ her ability. Good allowances must be provided to them to improve the working standards of the nurses (Sato et al., 2013). All these abovementioned conditions make it difficult for the nurses to work happily in the hospital or any healthcare centres. They often criticize the working conditions and are unable to work properly because of the environment given by the healthcare centres to the working staff, including nurses. They feel frustrated and cannot focus on their work (Mott et al., 2009). For good working conditions, a friendly and easy working environment must be provided to the nurses. If the nurse feels devastated and angry towards the clinic they work in, then it becomes

difficult for the healthcare centres to maintain the quality of services they intend to deliver to their patients. It may happen that the nurses leave the hospitals and join other healthcare centre that provides him/ her with the better working environment (Hodge and Marshall, 2007). This causes both reductions in the quality of services provided to the patients as well as the reduction in the number of staff that again put risk to the working conditions of other working staff (Duxbury and Whittington, 2005).

5.12 Relationship of PMVA training and refresher training with aggression control by nursing staff.

PMVA training and refresher training showed a significant positive relationship between overall perceptions of violence among nursing staff. The study will thus be helpful in creating the awareness in the healthcare centres that they must provide necessary training to the working staff to avoid future implications (Edward et al., 2014).

V. CONCLUSION AND RECOMMENDATIONS

From the study, it was clear that there was statistically significant relationship between overall dysfunctional/ undesirable phenomenon of aggression among nursing staff and attending PMVA, and refresher training. But there was statistically significant relationship between overall functional/ comprehensible phenomenon of aggression among nursing staff and attending refresher training. Refresher courses are intended to impart nurses with instrumental knowledge on diverse and emergent phenomena such as aggressive behaviour among patients (Eriksen & Frandsen, 2018). Therefore, it is highly recommended that the hospital keeps initiating a yearly refresher program (Farrell, Thompson & Mehari, 2017). If nurses are educated on the techniques of handling mentally ill patients who are aggressive, the behaviour will not escalate to serious levels. In this case, there was statistically significant relationship between overall perception of violence among nursing staff and attending PMVA training during last three years, and refresher training.

Nurses should also be trained on nurturing emotional intelligence (Harwood, 2017). The emotional intelligence is achieved through fine emotional training and the tendency to stay steady and stabilise during aggressive and emotional working scenarios with inpatients (Harwood, 2017). The study illustrates adverse moral emotions dimension, the highest mean score was for feeling sorry for the patient (3.01±1.01), followed by having a guilty conscience towards the patient (2.29±0.97) and having feelings of being a failure (1.89±0.85). The mean scores of the items of adverse moral emotions dimension of violence indicates sometimes nursing staff feel sorry for the patient, and seldom they have a guilty conscience towards the patient, and they never have feelings of being a failure, and feel ashamed of their work. Nurses should be emphatic to the patients and as much as they should demonstrate empathy, there is also a need to balance their emotions to avoid being hurt by the patient's behaviour (Avander, Heikki, Bjerså & Engström, 2016). From the study, it is clear that some of the nurses feel offended and hurt and this may affect their work performance. At the same time, regarding adverse feelings to external sources dimension, the highest mean score was for feeling that I have to deal with societies' problems (2.67±1.13) followed by having feelings of anger towards the clinic (2.10±0.90). Theses mean score indicates the studied nursing staff often feeling that they have to deal with societies' problems and feelings of anger towards the clinic they are working in.

The study verified that there was no statistically significant relationship between overall violence perception and demographic characteristics of nursing staff except experience years in mental health service, especially between nursing staff who having experience years between 4-7 years and more than 7 years.

Recommendations for the Hospital Administration:

1. As it has been seen through the research that violence and aggression behaviour of the patients will lead to frustration among the nurses and they will not be able to focus properly on the health care facilities of the patients thus it is important for the health care centers to provide standard health care facilities and a proper working environment to the nurses.
2. Nurses can be assisted through workshop format and nurses should sightsee and should discover nurse's beliefs about the aggression of patients along with its causes and consequences on nurses' health. Through the workshop the nurses can visualize the practicality of the issue and its handling. Moreover, training manuals can also be provided to the nurses to provide the theoretical information (Edward et al., 2016).
3. Nurses should also recommend any specific changes they want in the training or the technical training in order to overcome the aggression from patients.
4. Nurses with best experience of mental health care and training of mental health care must educate and teach other nursing staff about how to treat the patients who suffer from mental disorders as it will enhance the quality of the health care facilities provided by the Institute. This study thus be helpful in overcoming the stressors and aggressive behaviours of inpatients. It is anticipated this study results would be beneficial in shaping future training to improve patient and nurse relationships and the working environment.

5. Recommendations for Future research:

This study was done as quantitative research, however to have in-depth and rigorous knowledge of the phenomenon, a study before could be done before and after training program, after training to

be done on 2 phases first after training immediate and the second after 3 months from the training, in addition to a qualitative research study can be encourage so it can be done by interview and observation of the participant as research tools on the same population.

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Appendices

Appendix 1

A- Research Questionnaire 1 (POAS short)

Original item-	Aggression…	Strongly	Agree	Uncertain	Disagree	Strongly
2	… is violent behavior to others and self	1	2	3	4	5
4	… is emotionally letting off steam	1	2	3	4	5
5	… is practically beating up someone else	1	2	3	4	5
7	… offers new possibilities in nursing care	1	2	3	4	5
14	… is hurting others mentally or physically	1	2	3	4	5
15	… is any act of physical violence	1	2	3	4	5
17	… helps the nurse see the patient from another point of view	1	2	3	4	5
19	… is an expression of emotions, just like laughing or crying	1	2	3	4	5
24	… is a tool patients use to exercise power over others	1	2	3	4	5
26	… is the protection of one's territory and privacy	1	2	3	4	5
27	… is the start of a more positive nurse-patient relationship	1	2	3	4	5
28	… is any expression that makes someone else feel unsafe, threatened, or hurt	1	2	3	4	5

Please note: Higher scores on the two dimensions (positive and negative) denote the concept's distinctness. Analytic scheme: recode scores (1 to 5, 2 to 4, 3 remains, 4 to 2, 5 to 1). The excel file will do this for you.

Appendix 2

B- Research Questionnaire 2 (The impact of aggression scale (IMPACS))

Ian Needham, November 2020

After dealing with patient aggression…	Never	Seldom	Sometimes	Often	Always
1. I have a "guilty conscience" towards the patient	☐	☐	☐	☐	☐
2. I experience a disturbance in the relationship with the patient	☐	☐	☐	☐	☐
3. I avoid contact with this patient	☐	☐	☐	☐	☐
4. I feel sorry for the patient	☐	☐	☐	☐	☐
5. I feel insecure in working with the patient	☐	☐	☐	☐	☐
6. I feel that I have to deal with societies' problems	☐	☐	☐	☐	☐
7. I have feelings of anger towards the clinic/hospital I am working in	☐	☐	☐	☐	☐
8. I feel insecure at work	☐	☐	☐	☐	☐

Please note: Higher scores on the three dimensions (Impairment of relationship, Adverse moral emotions, and Adverse feelings to external sources) denote the concept's distinctness. Thus, no recoding of the items is necessary.

Factor interpretation

1. Impairment of relationship between patient and carer, (German: Beeinträchtigung der Helfer-Patient-Beziehung): Items 2, 3, 5, and 8.
2. Adverse moral emotions, (German: negative moralische Emotionen): Items 1, 4, 9,10.
3. Adverse feelings to external sources, (German: negative Gefühle gegenüber dem Umfeld): Items 6 and 7.

Appendix 3

APPROVAL LETTER
MEDICAL RESEARCH CENTER
HMC, DOHA-QATAR

Mr. Khaled Mohammad Hasan Hamed **Charge Nurse (CF)** **Inpatient** **Mental Health Service (MHS)** **Hamad Medical Corporation**	**Date: 04th March 2021**
Protocol No.	MRC-01-21-069
Study Title	A study to assess the perception and attitude of nurses towards violence and aggression a cross-sectional study in mental health services (HMC)
The above titled research study has been approved to be conducted in HMC summarized as below:	
Study type:	Clinical Research
Team Member List:	Dr. Maryam Hussain Siddiqui , Mr. Khaled Mohammad Hasan Hamed
Review Type :	**'Exempt'** under MOPH guidelines **"Category (2) Research involving the use of:** Survey and/or interview procedures in adults only **UNLESS**: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; **AND**(ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability **OR** be damaging to the subjects financial standing, employability, or reputation."
Decision :	Approved
Hospitals/ Facilities Approved:	Mental Health Service (MHS)

This study must be conducted in full compliance with all the relevant sections of the Rules and Regulations for Research at HMC and the Medical Research Center should be notified immediately of any proposed changes to the study protocol that may affect the 'exempt' status of this study. Wherever amendments to the initial protocol are deemed necessary, it is the responsibility of the Principal Investigator to ensure that appropriate reviews and renewed approvals are in place before the study will be allowed to proceed.

Please note that only official, stamped versions of the approved documentation are to be utilized at any stage in the conduct of this study. The research team must ensure that progress on the study is appropriately recorded in ABHATH, the online research system of the Medical Research Center.

We wish you success in this research and await the outcomes in due course.
Yours sincerely,

Prof. Michael Paul Frenneaux
Chief of Scientific, Academic and Faculty Affairs
Hamad Medical Corporation

Date: 04th March 2021

Appendix 4

Khaled Mohammad Hasan Hamed

From:	Needham Ian <needham@bluewin.ch>
Sent:	Thursday, 19 November, 2020 6:04 PM
To:	Khaled Mohammad Hasan Hamed
Subject:	AW: Research tools for : The effect of a training course in aggression management on mental health nurses
Attachments:	Needham_1382.pdf; 2005_Needham.pdf; 2020 _Impacs_english_fact_sheet_Needham.doc; Impacs_analysis.xls; 2004_Needham.pdf; POAS short_coding scheme.doc; POAS-S.xls
Follow Up Flag:	Flag for follow up
Flag Status:	Flagged

Hello Khalde Mohammad Hasan Hamed

Please find enclosed the materials you requested, excepting the Tolerance Scale by Whittington (you will have to ask him for permission).
I wish you lots of success in your research. Please send me – as a souvenir – your translations into Arabic.

Alle the best to you, Sir

Dr. Ian Needham
Pflegewissenschafter MSc
Rechtspsychologe MSc
Feldstrasse 28
9500 Wil
Schweiz

+41 76 29 67 424

Von: Khaled Mohammad Hasan Hamed <KHamed@hamad.qa>
Gesendet: Sonntag, 15. November 2020 12:46
An: needham@bluewin.ch
Betreff: Research tools for : The effect of a training course in aggression management on mental health nurses

Good day, Dr Ian Needham

I am Khaled Hamed, a Master student at the University Of Essex UK, and working now at Hamad Medical Corporation in Qatar. Now I am started with my dissertation and looking for your support.
i am interested in your research: The effect of a training course in aggression management on mental health nurses' perceptions of aggression: a cluster randomized controlled trial.
As I am a trainer for this course in mental health in Qatar so it will be great to do my dissertation about this topic.
In your research, you used
- the perception of aggression the short
version of the Perception of Aggression Scale (POAS-S)
- 'Tolerance Scale'' (Whittington, 2002) uses 12
items of the ''Perception of Aggression Scale
- The ''Impact of Patient Aggression on Carers Scale''
(IMPACS)
So I am asking here if you and the team will allow me to use the same tools.
I will really appreciate your support to send me those tools to start looking at it and to use it in my research.
waiting for your response.

Thank you

Khaled Mohammad Hasan Hamed
BSC,PGD,
CHARGE NURSE (CF), CFMHS-MHS
ECT,PACU
PMVA & Conflict management Trainer
Tel: (+974) 44384589
Fax: (+974) 30322183
Mob: (+974) 66981592

Appendix 5

مؤسسة حمد الطبية
Hamad Medical Corporation
HEALTH · EDUCATION · RESEARCH صحة · تعليم · بحوث
مركز البحوث الطبية
Medical Research Center

MD Approval Form (Mental Health Service)				
1. Initial Information				
RP # & Title of Study	MRC-01-21-069: A study to assess the perception and attitude of nurses towards violence and aggression a cross-sectional study in mental health services (HMC)			
Principal Investigator (Name, Designation, Department & Facility) *HMC Investigator's details must be entered*	Mr. Khaled Mohammad Hasan Hamed, Forensic Community Mental Health Team, Inpatient Charge Nurse, Mental Health Service			
Contact Details	Phone No: 66981592	Email: KHAMED@hamad.qa		
Type of request	☒ New study ☐ Amendment			
Project type	☒ Research ☐ Case-report ☐ Quality Improvement ☐ Clinical Audit ☐ Surveys			
2. Site Information				
Research Sites (Departments involved from your facility)	Dept of Nursing			
Other Facilities involved from HMC	Not Applicable			
Are there any prospective recruitment of patients/ staff to study, collection of samples or information from human subjects?	☒ **Yes** ☐ **No**			
Summary of Tasks to be undertaken in this Hospital?	**Please list the tasks which will be undertaken in the Hospital where governance approval is requested for, eg: patient recruitment, medical records, pharmacy, radiology, laboratory etc.** ☐ **Patient recruitment and consenting** ☐ **Data from medical records** ☐ **Pharmacy (drug dispensing)** ☐ **Lab procedures** ☐ **Radiological examination** ☒ **Survey among staff** ☐ **Other:**			
Is the Scheme of Delegation list complete and signed?	**Yes** ☒ **No** ☐			
3. Governance				
Hospital Governance			**YES**	**NO** / **NA**

Clinical Governance Approval Checklist
V5 27 apr2017

مؤسسة حمد الطبية
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مركز البحوث الطبية
Medical Research Center

The hospital is satisfied with the clinical governance arrangements for this project	☒	☐	☐
The HRO confirms that the clinical governance has been completed and signed by the relevant departments as per sites listed in the study protocol	☒	☐	☐
Does the objective of this study comply with the hospital policies	☒	☐	☐
The hospital has the capacity & capability to deliver this study.	☒	☐	☐

4. Approval

Decision: ☒**APPROVED** ☐ **REVIEW** ☐**REJECTED**

Dr Anjushri Bhagat
Hospital Research Officer

Signature: _____ **Date: 25/02/2021**

Prof. Peter Micheal Haddad
Research Advisory Group Chair

Signature: _____ **Date: 25/02/2021**

Dr Mohamed El Tahir
Quality Improvement, Audit and Research Committee Chair

Signature: _____ **Date: 25/02/2021**

Clinical Governance Approval Checklist
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