The Relationship between Organisational Commitment and Burnout: A Comparative Study of Nurses from a Health Care Service

Alotni Majid Ali S*

Queensland University of Technology, Nursing Faculty
*Corresponding author: mmaajjiidd@hotmail.com

Abstract **Purpose**: this study examined the correlation between the burnout and organisational comment in nurses working in health services in different sites. The research would fill a gap in the global literature review by enhancing a perspective of Australian nurses who work in hospitals. **Background**: low commitment to the organisation and the level of burnout that staff experience would cause absenteeism which then lead to turnover, thereby exacerbating the problems related to recruitment and retention. **Research design:** This dissertation is based on secondary data that was collected to measure the burnout using MBI scale, and organisational commitment, using OCQ scale of 150 nurses in different six hospitals. **Method:** Confirmatory Factor Analysis and Cronbach Alpha tests were applied to the OCQ followed by Bivariate Analysis to discover the relationship between organisational commitment measured by OCQ and Burnout measured by MBI. **Result:** two-dimensions for the Organisational Commitment Questionnaire was obtained: value Commitment & Commitment to stay, with acceptable internal consistency and reliability measurement. A correlations among OCQ subscales and MBI scales was revealed. **Discussion**: the study rejects the claim of first developer and confirmed the multidimensionality of OCQ and compatibility of this result to AL-Yami et al [1] and Angle and Perry [2] Organisational commitment and burnout are reversely related despite of the Personal Accomplishment subscale is ineffective. **Practical and managerial implications:** This will help create understanding of nurses' needs and make use of the findings to minimize negative outcomes. Outcomes from this study provide further support for nursing managers to understand the organisational factors that influence the level of burnout in nurses.

Keywords: *organisational commitment, nurses, organization, australia, burnout, relationship, comparative*

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1. Introduction

1.1. Background

Employees are vital determiners of the quality of services that can be provided by organisations, including health care services. However, within these organisations, not all employees contribute well. The reasons for this are varied as multiple factors are at play. This thesis will examine two of these: burnout and organisational commitment. A small body of research has demonstrated that each factor can negatively influence nurse's performance [3,4]. In health care services, burnout and organisational commitment have been known to be associated with many issues related to the nursing field.

Recruitment and retention of qualified nurses has been cited as a core issue in maintaining the quality of healthcare delivery. Two often cited indicators that poor recruitment and retention of nurses are high absenteeism and high turnover of staff. In examining this in closer detail we have come to understand that the welfare of nurses and how they are treated within an organisation are major contributing factors to these issues. Two adverse precursors to this can be a lack of organisational commitment and job burnout.. Given that nurses are among the most affective professionals in health care [5], anything that weakens this profession would consequently damage other professions and the health systems as a whole.

The current trend towards nurse shortages will most likely have the most negative impact on the future of healthcare provision. Consequently, there is a fear that this shortage may harmfully decrease organisational knowledge of individual facilities, which could then negatively impact other nurses who continue practising, despite shortages [6].

Researchers have identified two key factors that impact absenteeism and retention of new young nurses: (i) commitment to the organisation and (ii) the level of burnout that staff experience [7,8]. The resultant combination

of factors, could lead to turnover, thereby exacerbating the problems related to recruitment and retention.

1.2. Absenteeism in Acute Clinical Settings

Absenteeism is intentional and habitual absence from work, and has a negative effect on employers. Although absenteeism has been thoroughly studied in the manufacturing industry, it is just as prevalent in the health care sector [9], it is most common in nurses who work in acute care settings; most likely because of their heavy workloads and the high staff turnover in this area of nursing [10]. Any increase in the prevalence of this phenomenon could have further negative effects, not only on the nursing profession and the organisations in which they work, but also on patient care.

Absenteeism is an issue: for example, British figures on 2006, showed that approximately 400 thousand workers were absent for a variety of reasons. This weakened the organisations and society served by those employees [11]. Extrapolation of this result suggests that not coming to work regularly would present a risk of developing low commitment to the organisation.

Nurses absent from work could be the result of factors that demotivate them. An example of a demotivating factor is low organisational commitment. "An employee who is absent from work is consciously or unconsciously expressing negative attachment to the organisation" ([12], p. 156). Therefore, absenteeism could result from poor organisational commitment and probably contributes to committed nurses developing burnout.

In Australia, the rate of sick leave for nurses has increased, which creates difficulties for other staff who have to provide additional patient care [13]. There is a very real risk that this could lead to burnout in a clinical unit and to the eventual prospect of nurses moving on to another work place or leaving the profession.

Burnout is another prominent contributor to absenteeism. Burnout is responsible for decreasing productivity among nurses contributing to an unhealthy environment in which to work [14]. Stress consumes a nurse's power and tolerance which would reduce their ability to maintain a high standard of patient care.

Health care delivery is also effected by absenteeism. An adequate ratio of nurses to patients is known to be significant to patient safety and effective nursing care [15]. For example, according to Queensland Parliament (2015) in its report to Hospital and Health Boards (Safe Nurse-to-Patient and Midwife-to-Patient Ratios), stated that the nursing absenteeism leads to below normal ratio of nurse to patient, resulting in less care, major complications, high readmission rates and medication errors. Similarly, the United States of America (USA) Joint Commission responsible for the accreditation of Healthcare organisations (JCAHO), found that inappropriate staffing level of nurses in 1609 hospitals was directly related to 24% of patient injuries and cited examples of fatality. Absenteeism has also been reported as contributing to physical or psychological harm to one or more patients [16]. Consequently, absenteeism has a direct correlation with low quality of healthcare delivery, which may potentially lead to something more complicated such as turnover.

1.3. Turnover in the Nursing Profession

Nurses' organisational commitment may be affected by high staff turnover and high levels of burnout. High staff turnover creates direct and indirect effects on employee burnout and stress, including the roles of the work environment and organisational communication [17]. In relation to nurse turnover, it is believed that organisational commitment is the most effective determiner in the decision to either stay or leave the organisation. Organisational commitment of workers plays an intermediary agent role between burnout and turnover intention, and is very accurate as a predictor of intention to leave an organisation [18].

Burnout may lead to high turnover among nurses by influencing a healthcare professional's choice to leave an organisation [19]. There is a positive and strong relationship between burnout and nurses intention to leave [19]. This relationship is a result of many factors impacting nurses, especially those who work in acute care and lead nurses to transfer from or quit their job. These include: manager and co-workers influence; payment; lack of skill or time and family responsibilities [20]. Therefore, organisational commitment and burnout should be studied in more depth to discover how they influence nurse turnover.
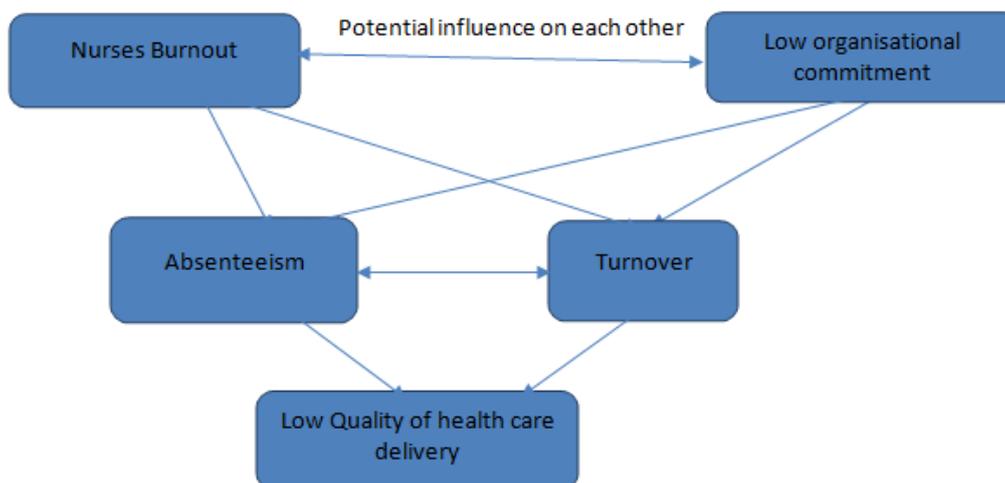
Figure 1. The summary of the proposed study to find correlation between burnout and organisational commitment

1.4. The Purpose Statement

Nurse burnout and organisational commitment, can reduce the quality of patient care through negatively affecting nurses performance. The relationship between those two factors was reviewed by considerable number of researchers. The purpose of this study is to explore the relationship between the Maslach Burnout Inventory subscales (personal accomplishment, depersonalisation and emotional exhaustion) and organisational commitment sub dimensions described by Mowday et al [21]. Initially, the scale described by Mowday et al [21] will be examined to substantiate whether the three dimensions are indeed subscales. An in-depth review of each of the identified factors from both scales will be conducted to support the reasons for further correlational analysis. The result of this is demonstrated in Figure 1 how both burnout, burnout, organisational commitment, nursing turnover and absenteeism are possibly related. The burnout and organisational commitment have indirect interrelationship resulting in low quality of health care delivery affected through nursing turnover and absenteeism or both and the aim of this study is to ultimately demonstrated the relationship between burnout and organisational commitment.

2. Literature Review

2.1. Introduction

The measurement of organisational commitment and burnout in Australia has been studied across various occupations, but has not been studied recently in the nursing field. In this study, two different tools are used to measure the level of both burnout and organisational commitment: Maslach Burnout Inventory (MBI) and Organisational Commitment Questionnaire (OCQ).

2.2. Search Method

Studies and earlier research relevant to the current research topic, were identified by searching the databases of CINAHL, PubMed, Queensland University of Technology library, Medline, Google Scholar and Academic Search Elite. Keywords used were: "nurse", burnout, "correlate", Organisational Commitment, stress and scales. The Boolean indicator 'AND' was used to select the studies that applied to both burnout and organisational commitment. The search strategy is based upon the analysis of the effects of burnout and organisational commitment on nurse retention. Only English language texts were sought, and the t search was limited to articles published between 1975 and 2018. Studies related to factor analysis were searched to summarize the correlation amongst variables briefly but more precisely to enable understanding of correlation between the subscales of the MBI and the OCQ.

2.3. Organisational Commitment

The workplace environment has a significant effect on workers enabling them to feel comfortable. It also has a direct effect on their level of dedication to that workplace, which has been estimated as a measure of organisational commitment. Zangaro [22] defined organisational commitment as the relative power of an individual's relationship to an organisation. The belief is that an employee's commitment to any organisation could play a considerable role in its overall success.

Commitment of nurses to their respective healthcare facilities has proven to be essential in improving organisational effectiveness and staff retention. Spence Laschinger, Finegan, and Wilk [23] state that commitment of an employee refers to an employee's attachment, identification, and involvement with the organisation, factors that are positively related to job performance. Organisational commitment should be examined routinely in nursing turnover research studies [24]; however the literature reveals inconsistent findings regarding this.

Organisational commitment has a significant impact on nurse's presentation. Organisational commitment is believed to be a part of the nurse's retention issue [25]. When nurses leave organisations it creates nursing shortages and could lead to low quality care. The ongoing nursing shortage is a significant concern for hospitals around the world. According to Nurses International, the nursing shortage rate in the USA in 2011 was 20% [26]. However, as a result of projected nurse attrition, that figure is expected to reach 36% by 2020. However, due to ageing of the population, necessity for nursing services increases every year. It is clear from this study that organisational commitment is a crucial consideration for effective nursing retention.

2.4. The Measurement of Organisational Commitment

Mowday et al [21] described behavioural and attitudinal aspects to organisational commitment. Attitudinal commitment focusses on the relationship that people have with their organisation and how their goals and values align with that of the organisation. Behavioural commitment describes how individuals deal with their day to day work and how this affects their attitude towards their work.

The Organisational Commitment Questionnaire developed by Mowday can be categorized into 3 main factors: (1) a strong belief in and acceptance of the organisation's goals and values; (2) willingness to exert considerable effort on behalf of the organisation; and (3) a strong desire to maintain membership in the organization [21]. Mowday stated that these factors are behaviours toward an organisation. For example, when an employee goes beyond their job description to do extra work, he shows commitment related behaviour. The second factor, attitudinal commitment, is result of when a workers needs are being met by an organisation, such as higher payment or better job position [21]. However, Mowday and his associates eventually concluded that the OCQ measures only one overall factor.

Meyer and Allen [27] however described organisational commitment as having three different themes: (1) affective attachment, (2) perceived costs, and (3) obligation toward the organisation. They further describe a three-component framework of affective, continuance and normative commitment. These latent variables have some conceptual

links with Mowday's approach and measurement, but distinct differences remain in their description of each contributing factor in the overall measurement of organisational commitment.

The personal accomplishment (PA) factor of Meyer and Allen [27] is interpreted as a strong desire to maintain membership in the organisation. The scales measure how active the employee is in their ability to make a healthy atmosphere at work as well as the employee's capacity to deal with issues. Both factors, Strong Belief (Mowday) and Personal accomplishment (Meyer) give a hint of positivity to both organisations and employees, in that these factors lean toward a positive and healthy working atmosphere and active workers. The normative commitment component in Meyer and Allen [27] is very similar to Willingness to exert considerable effort on behalf of the organisation Mowday et al [21]. Normative commitment is described as being a result of an organisation rewarding its employee in advance, such as free medical care or education [27]. The danger is that this could cause the employee to feel obligated to their employer.

The latent variables described in Mowday's measurement of organisational commitment were examined by Angel and yielded only two dimensions. They are: (1) Value commitment, associated with questions regarding pride in the organisation, positive regard for the organisation and alignment with the organisation's morals and values (2) Commitment to stay relates to questions regarding membership. The first study considered that there are scale items that cluster around employee behaviours [2] and they consider participation to describe employee behaviours. Angle supported his findings by identifying the above two factors.

Al-Yami and his associates found in their 2018 study of Saudi Arabian nurses that their findings agreed with Angle & Perry [2], concluding that OCQ has two factors [1].

Data from the Saudi Arabian study was analysed using parallel analysis (see Appendix B) as it simulates random variables which have similar value to the collected data [28]. Factor analysis was conducted to explore the factor loading of each section of the scale. SPSS was then used to conduct Confirmatory Factor Analysis, (using structural equation modelling software AMOS), in order to confirm the fitting of variables to each factor. This confirmed that the OCQ has 2 factors with little difference in factor loadings of the items. OCQ 15 -Deciding to work for the organisation was a definite mistake on my part as it had low loading and was therefore discarded, and OCQ12 loaded highly (view Appendix A for list of scale questions).

The gap in the literature review arises from conflicting results regarding the number of factors contained in the OCQ. Mowday et al [21] asserts that the 15 items of OCQ scale resulted in one single common underlying construct. Akhtar and Tan [29] confirmed Mowday's assertion that the OCQ resulted in one factor. The following reason: Items were considered homogenous and independent leading to the resultant overlapping of items. Several other authors [1,2,29,30] described two subscales or factors; commitment to stay and value commitment. Fields [31] claimed to reveal that the OCQ has 3 different factors. Wang [32] goes further and posits that it can be construed as a five-component model, incorporating value, normative, affective, active and passive continuance.

2.5. Burnout

Burnout is a common issue characterised by symptoms of distress, exhaustion, irritability, loss of hope, and lack of productivity. Burnout saps energy, leaves the sufferer feeling hopeless and at its most damaging, could lead to depression (ANMF, 2017). Burnout can also lead to various other adverse health outcomes including anxiety, neck and back pain, poor self-esteem, sleep disturbances, and perceived memory impairment [33]. Fedele [34] asserts that burnout is a debilitating condition that is increasingly impacting nursing and midwifery services.

Burnout is an essential indicator for both human resources and practice leaders when tracking quality of care issues and could lead to the creation of a more supportive workplace with fewer stressors. One component of burnout is a perception of the inability to meet workplace standards leading to decreased productivity, increased absenteeism, increased turnover, and reduced quality of services [35]. These concerns regarding serious implications for the health and safety of patients as evidenced by increased reports of adverse patient outcomes [36] caused by burned out nurses is shared by Fradelos et al. [37].

2.6. The Measurement of Burnout in Nursing Staff

Burnout measurement scales include The Copenhagen Burnout Inventory and Shirom-Melamed Burnout Measure (SMBM) [38,39]. However, the most widely used scale is the Maslach Burnout Inventory [40] as. it is the first scale to have been used for the this purpose. It is believed to have contributed to shaping research relating to burnout as evidenced by MBI appearing in 93% of journal articles about burnout by the end of 1990 [41].

2.7. Relationship between OCQ and Burnout

There is high demand for both nurses and organisations to discover a relationship between burnout and organisational commitment. Low motivation and work performance negatively affect health organisations and are frequently related to psychological problems, and may present as low organisation commitment and high burnout rates among health workers thus contributing to high staff turnover and absenteeism [42].

Recent studies looking for this relationship by Enginyurt [42] were based upon the Meyer and Allen questionnaire. They describe that the affective component of commitment is one of the dominant factors that can be used to explain the onset of burnout in a person. The value commitment items identified by Al-Yami and Angle have many concepts that are similar to the affective commitment described by Meyer and Allen. It follows that value commitment could also be a dominant factor in predicting or describing the onset of burnout in healthcare employees. The Al-Yami et al [1] findings could be associated to the sub dimensions of Meyer and Allen [27] in that Value commitment and Affective commitment are both are related to the belief in organisations values and standards. The Commitment to Stay factor [1] is similar to the Continuous Commitment factor [27], both are about the

weighting up the potential losses of leaving the an organisation. Normative commitment, appears to cross over both value commitment and commitment to stay, as it describes both the desire and the need to remain at an organisation, leading to an overall obligation to the organisation.

2.8. Research Questions

1. How many factors does the Organisational Commitment Questionnaire, created by Mowday et al [21], have?
2. Is there a relationship between burnout measured by Maslach Burnout Inventory and organisational commitment measured by the Organisational Commitment Questionnaire?

2.9. Research Hypotheses

The first hypothesis is structured around the exploration of the assertion by the author that there are three factors associated with the OCQ but there is no published justification for this nor contribution from other authors to verify the existence of the three factors.

Null Hypotheses 1:

H_0: Organisational Commitment Questionnaire does not have three factors that identify subscales within the instrument.

Alternative Hypothesis 1:

H_1: Organisational Commitment Questionnaire has three factors that identify subscales within the instrument.

Null Hypotheses 2:

H_0: The Maslach Burnout Inventory (MBI) will have no relationship organisational commitment, as measured by the Organisational commitment questionnaire, of nurses who are working in acute care.

Alternative Hypothesis 2:

H_2: The Maslach Burnout Inventory (MBI) will have a relationship with the organisational commitment, as measured by the Organisational commitment questionnaire, of nurses who are working in acute care.

3. Research Method

3.1. Introduction

The two factor assumption described by Al-Yami was examined using secondary analysis on a set of de-identified data. The data was gathered from a previous study using a cohort of 150 nurses over an 18 month period. The participants were Registered Nurses across three different public hospitals in Queensland. Two of the hospitals were large metropolitan facilities and one was a smaller provincial hospital. There was a 18 month gap between the initial and follow up surveys, resulting in many participants of the initial survey not being available for the second. This was due to them either leaving the organisation or moving within the organisation to another ward outside the original study area. The result was 174 data sets with 150 participants available for analysis. The original survey design was focussed on nursing views of a clinical program to prevent aggressive patient behaviour in mental health settings.

The model of fit was used as the principal comparator using results obtained by Al-Yami et al [1]. He used the OCQ with nurses in Saudi Arabia. Parallel analysis revealed two factors of the Organisational Commitment Questionnaire [1]. This finding was consistent with the findings by Angle [2] in a different setting. There is some question regarding the accuracy of the findings as Al-Yami et al. [1] applied the factor analysis on the translated and back-translated Arabic version of the OCQ. AL-Yami was chosen over other researchers for two reasons: Test subjects and recency. Angle's [2] study was conducted to explore the organisational commitment of bus drivers, whereas Al-Yami et al [1] surveyed nurses. Angle's study was 1981 and Al Yami's 2018. A Chronbach test will be performed to confirm whether the chosen subscale has strong internal consistency.

Bivariate Correlation Analysis will then be conducted to answer the second hypothesis to determine any correlation and relationship between the subscales of OCQ and MBI. The relationship between burnout and organisational commitment based on MBI by Maslach & Jackson [40], and OCQ measured by Meyer and Allan [27] has been studied by Enginyurt et al [42], however, this current study is dependent on Mowday et al [21] which may create differences in the analysis between targeted relationships.

3.2. Factor Analysis

Factor analysis uses statistics and corresponding calculations to support an analysis of survey instruments and constructs and is one of the most accepted statistical methods. In Factor analysis, variables are categorised into groups that have something in common. This process summarises data in a way that produces grouped results that are easily understood. Furthermore, factor analysis supports isolation of conceptual elements and concepts, so that the conceptual elements develop a framework that can help in understanding and testing the concepts. Child, [43] identifies factor analysis as a simplification of many connected measurements by utilisation of a complicated and sophisticated mathematical method. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are the principal approaches to Factor Analysis. CFA confirms a hypothesis by using structural equation modelling to show variables and factors. In contrast, EFA is used to cover complex forms by testing assumptions to explore data [43].

3.3. Confirmatory Factor Analysis

Reliability and validity of social research is measured in order to check the appropriation for the applicability of a study across diverse populations and is an accepted and necessary activity in research. It is time consuming however, so Confirmatory Factor Analysis (CFA) was created. CFA is a kind of structural modelling in which a figure of the model of measurement is used to find the relationship between observed and latent variables and to confirm (test) hypotheses or theories [44].

Harrington ([45], page number) said that "In addition to savings in time and costs, using existing measures also helps to make research findings comparable across studies

when the same measure is used in more than one study". It is possible to use CFA to explore whether the prime data from any measure would run properly when used in a new culture or population. Floyd and Widaman [46] and Harrington [45] assert that confirmatory factor analysis is a very useful test that supports the evaluation of whether a previously specified factor model provides a good fit for new data. Shek and Yu [47] added that CFA tests whether theoretically determined specific factors actually match the variance of an observed set in a way that is formally hypothesized.

3.4. Factor Loading

Factor loading is located in the component matrix, where a table represents each of the component values. The process of loading factors shows the correlation between items or variables. The relation between variables in a rotated matrix component determines further analysis interpretation. Factor loading extends from -1.0 to 1.0 and can be interpreted much like a correlation coefficient. It demonstrates: (a) The degree to which all items are related to at least one typical variable; (b) How sharp each item is identified with each factor (and whether the item ought to be held or to be emerged inside a factor) and (c) How much variety in interaction between items can be represented by each factor or subgroup. We considered items with factor loading ≥0.4 as unequivocally identified with a hidden factor ([48], p. 83).

3.5. Cronbach's Alpha (Reliability)

The internal consistency of a survey is usually tested by a tool such as Cronbach's Alpha coefficient to determine its validity and reliability. Cortina [49] stated that alpha does not merely measure the unidimensional nature of a group of items, it can also be used to check whether a sample of items is actually unidimensional Thus it is a method to test internal consistency, and that there is no contradiction between the outcomes and the tested variables. The method creates arguments and determines if those arguments are connected to each other. Secondly, coefficient alpha ensures that no contradictions exist between variables. The value of Cronbach Alpha can fall between negative infinity ($-\infty$) and 1, but the value of alpha (α) is normally recorded as a value between 0 and 1 where $\alpha \geq 0.9$ is excellent, $0.9 > \alpha \geq .08$ good, and $0.8 > \alpha \geq 0.7$ acceptable ([50], p. 354). For Cronbach Alpha to work, the scale variables must be multidimensional and the alpha test must consist of more than one dimension, in which case each concept will be given its own alpha rate [51]. This analysis will confirm any relationship that may exist between the two chosen scales. The Cronbach's Alpha does have some limitations. Alpha is not invariant, so a large number of variants produces excellent variance of alpha regardless of the consistency or items [52]. Therefore, using Cronbach's Alpha as a sole indication to find internal consistency is not considered sufficient evidence by itself.

3.6. Bivariate Correlation Analysis

Bivariate Correlation Analysis helps in seeing how two variables are related. This involves summarising the collected data that has been gathered in an intended research study. Typically, a research study explores relationships or interrelations between two variables, such as changes in one factor through a group defined by another variable. It usually contains variables X and Y and tests the simple hypothesis of association and causality. Bivariate correlation shows the linkage strength between two variables in one value (-1 and 1). This value is called a correlation coefficient and is represented by the symbol (r). The correlation coefficient between two continuous variables called personal coefficients. Positive correlation between two variables for example A and B means the taller A is then the taller B is and negative relationship means the taller A is then the shorter B is and vice versa. The alternative is that there may be zero relationship [53].

3.7. Statistical Analysis

Data cleaning and frequency processes compensate for missing data with each individual respondent. Respondents who did not answer more than 50% of the questions were excluded. Sample one contains 108 nurses as participants after one was excluded for a 0 response to the OCQ scale. In this study, sample size is 174 (after data cleaning) 108 for sample one and 66 for sample two. Missing values were replaced for 5 values of the 174 participants, using a mean of the remaining scores for that individual.

Structural Equation Modelling (AMOS) was used on the prepared data to conduct the CFA, using version 22.0 from IBM. Data was uploaded from a SPSS file then a figure similar to Al-Yami [1] was applied to the current data.

3.8. Ethical Consideration

Ethical approval for this study was obtained from The University of Queensland of Technology committee with approval number 180000840 on 18th of August 2018.

4. Results

4.1. Introduction

Statistical tests conducted in this study include confirmatory Factor Analysis (CFA), Cronbach's Alpha, Mean, Standard Deviation of individual scales of the organisational commitment questionnaire (OCQ) described by Mowday and a further Bivariate Analysis between this OCQ and the Maslach Burnout Inventory (MBI). The demographic data for this study are shown in Table 1. The number of participants given the survey was 150, providing the current sample of 173 returned surveys. Data was lost in the 18 month time period, due to screening between sample 1 and 2. Sample 1 data is included.

108 participants (62%) returned the initial survey and 99% of this data was included in the current study. Sample two provided 65 (38%) surveys with all data available for the current analysis. Female nurses represented 61% of all participants, 49% of which were above 40 years old while 45% were below 40 years old. One percent of the females (7 participants) did mention their age. Male participants were 39% of the sample, 49% was above 40 years old and 51% of male nurses were younger than 40 years old.

Table 1. Demographics characteristic of the research respondents

			N	%	Mean age	SD	Mean OCQ
	Male		59	39%	40	12	4.76
	Female		91	61%	41	14	5.00
	Total		150				
Age							
	Male	under 40	30	51 %			5.00
		Over 40	29	49%			4.42
	Female	under 40	40	45%			5.03
		over 40	44	49%			4.96
		Not mentioning age	7	6%			
	Total		150				
Years employed*							
		less than 1 year	10				4.89
		1 - 2 years	6				5.60
	Male	2 - 4 years	13				4.93
		4 - 6 years	13				4.23
		6- 8 years	4				4.82
		More than 8 years	13				4.75
		Never employed in Mental Health	0				
		Did not mention age	0				
		less than 1 year	14				5.42
		1 - 2 years	10				4.87
	Female	2 - 4 years	15				4.53
		4 - 6 years	15				5.13
		6- 8 years	10				5.27
		More than 8 years	20				4.89
		Never employed in Mental Health	0				
		Did not mention age	7				
	Total		150				

The majority of surveyed nurses had more than 8 years' experience regardless of gender. All participants worked in mental health care. The smallest group of both male and female participants had 5-8 years of experience.

4.2. Testing Hypothesis One

4.2.1. Model of Fit Measurement

The result of the Confirmatory Factor Analysis (CFA) displayed in Figure 2 demonstrate that the Organisational Commitment Questionnaire has two factors namely (i) Value Commitment (VC) and (ii) Commitment to Stay (CtS). Item loading was similar to that described by Al-Yami [1].

Item loading in the first factor VC contained the survey questions OCQ1, OCQ2, OCQ4, OCQ5, OCQ6 OCQ8, OCQ10, OCQ13 and OCQ14. The subscale uses statements such as "I am willing to put in a great deal of effort beyond that normally expected in order to help this hospital to succeed" and "I would put up with a lot of hassles in order to keep working for this hospital". The second factor, CtS contains items, OCQ3, OCQ7, OCQ9, OCQ11 and OCQ12. Example statements are: OCQ7 "I could just as easy work for a different hospital as long as the type work was similar", and OCQ9 "It would take very little change in my present circumstances to cause me

to leave this hospital". The measures used for fit are shown in Appendix C.

The fit indicators show acceptable results (view Table 2). The Root Mean Square Error of Approximation (RMSEA), shown in Appendix C, shows good fit of the current data to the model (0.07). Also called badness of fit, Hu and Bentler [54] state that an RMSEA that close to 0.6 indicates a relatively good fit. Chi-square also had a satisfactory value, despite having twice the degree of freedom score (df), indicating great value for the hypothesised of variance for the true population. By inspecting the model of fit for the scale, intercorrelation of the variable e12 (OCQ9) and e13 (OCQ11) produced some error variance (view Appendix D) and that the covariance between these items was high. Figure 3 shows how the correlation among variance changed after restricting the model. Consequently, the model of fit indices display better values for Goodness of Fit Index (GFI), indicating the fit between the hypothesized and observed models, with the normal value of > 0.9 (Hu, 1999). Hu adds that the Comparative Fit Index (CFI) which examines the inconsistency between the observed data and the hypothesised model, should be above 0.9. RMSEA and Chi-square when Chi-square /df values is below 2.00, therefore this model is considered to be a fit.
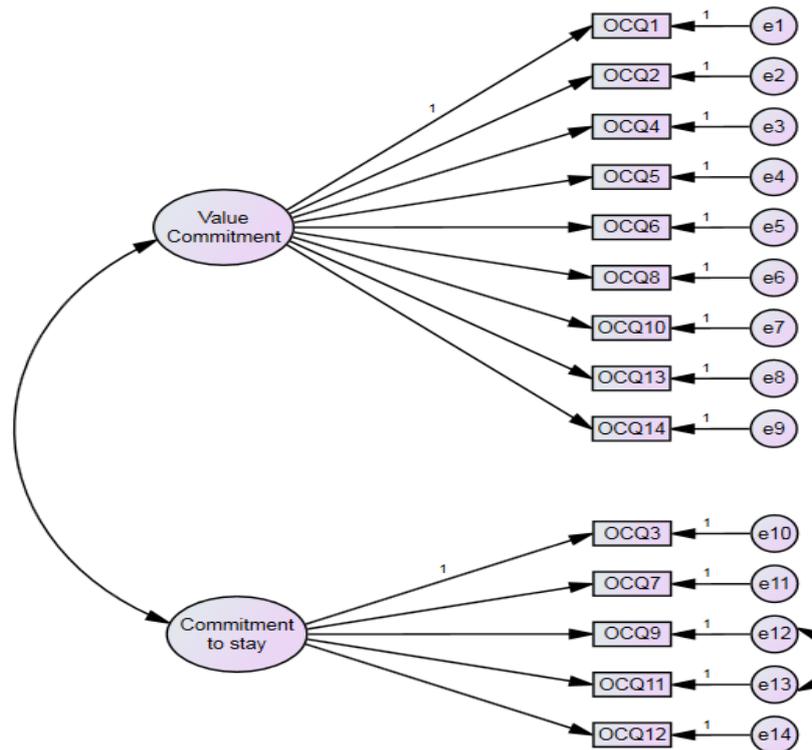
Figure 2. Representative diagram of structural equation to represent a hypothesized model of the correlation between items of the Organisational Commitment Questionnaire (OCQ). In this diagram: square refer to OCQ variables and Oval to the latent variable

			M.I.	Par Change
e11	<-->	e14	4.049	.498
e7	<-->	e14	8.529	-.457
e7	<-->	e13	4.733	.255
e5	<-->	e11	5.810	-.492
e4	<-->	e14	6.663	.484
e4	<-->	e12	6.846	-.470
e4	<-->	e6	5.105	.343
e3	<-->	stay	9.110	-.339
e3	<-->	Value	5.290	.141
e3	<-->	e13	9.402	-.512
e3	<-->	e12	4.576	.456
e3	<-->	e9	4.800	.385
e2	<-->	e7	5.898	.276
e1	<-->	e8	5.001	.241
e1	<-->	e2	5.868	-.300

Figure 3. The correlations among error variances of the OCQ items

Table 2. Model of Fit for the Confirmatory Factor Analysis of the OCQ scale

Current study Fit index	Value
GFI	.904
CFI	.888
RMSEA	.070
Chi-Square	138.1 (df=75)

Note. CFI = Comparative Fit Index; df = Degree of Freedom; RMSEA = Root Mean Square Error of Approximation.

4.2.2. Reliability Statistics

Next, the Cronbach's Alpha was applied to Organisational Commitment in order to test its reliability. Table 3 shows the Cronbach's Alpha was .833 for the OCQ, which is acceptable.

Table 3. Cronbach's Alpha to discover the reliability of Organisational Commitment Questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.833	.840	15

Therefore, alternative hypothesis one was rejected as the current OCQ data demonstrated two subscales when applied to the Al-Yami model. The Null Hypotheses1 is accepted as the OCQ does not have 3 factors.

4.3. Testing Hypothesis Two

4.3.1. Descriptive Statistics

Descriptive statistics for the burnout and organisational commitment scales are shown in Table 4. The mean for the subscale of VC represents the highest value (mean = 44.9013) among other subscales and very close to that is the PA subscales (m = 41.7718) following closely. The lowest value is the DP with (mean = 13.1221). Table 4 shows the relationship between latent variables of Organisational Commitment Questionnaire and three dimensions of Maslach Burnout Inventory.

Table 4. Descriptive Statistics for the examined factors are showed

	Mean	Std. Deviation
VC	44.9013	8.78981
CtS	24.0057	5.87883
EE	30.3627	10.33369
DP	13.1221	4.84909
PA	41.7718	6.20987

VC, Value commitment; CtS, Commitment to Stay; EE, Emotional Exhaustion; DP, depersonalization; PA, Personal accomplishment.

4.3.2. MBI and OCQ Correlation

Emotional Exhaustion and Depersonalisation (r=0.567, P < 0.01) had the highest correlation, while Commitment to stay and Personal accomplishment (r=0.156, P< 0.05) had the lowest. Value Commitment and Commitment to Stay demonstrated the highest correlation (r=0.554, P < 0.01). Commitment to stay (CtS) is negatively correlated with EE (r=-0.286) and was the highest correlating subscales between organisational commitment and MBI. Table 5 demonstrates that EE is the most correlated with OCQ subscales, DP comes second in correlation with OCQ subscales while PA is the least correlated with OCQ subscales. The correlation among subscales of OCQ and MBI are positive except the subscales PA that is negatively correlated with VC and CtS (r = 0.249 & 0.156 respectively).

Table 5. Correlation matrix for the OCQ and MBI scales sub dimensions

	VALUE commitment	Commitment to stay	EE	DP	PA
VC	1				
CtS	.554**	1			
EE	-.202**	-.286**	1		
DP	-.179**	-.243**	.567**	1	
PA	.249**	.156*	-.245**	-.329**	1

VC, Value commitment; CtS, Commitment to Stay; EE, Emotional Exhaustion; DP, depersonalization; PA, Personal accomplishment.
**. Correlation is significant at the P<0.01 level (1-tailed).
*. Correlation is significant at the P< 0.05 level (1-tailed).

5. Discussion and Findings

5.1. Introduction

This research offers significant insight related to factors affecting recruitment and retention of nurses that may be better predicted with an enhanced understanding of the relationship between organisational commitment and burnout. However, comparison with other international and nationally published studies is advised. This would allow a better understanding and give a plausible rationale for findings related to the nursing field as well as healthcare organisations.

5.2. Organisational Commitment Questionnaire

The Organisational Commitment Questionnaire (OCQ), created by Mowday, et al. ([21], p. 226), has 15 items which purportedly measure a single common underlying construct. These items are rated on a scale ranging between 1 (strongly agree) and 7 (strongly disagree). Scores of 90 and 1 are the maximum and minimum possible scores respectively. Organisational Commitment scores are divided into three groups: low, up to 33; middle, between 34 and 56; and high, 57 and above. Significant evidence was provided by Mowday and his associate to test the internal consistency and validity of Organisational Commitment Questionnaire. Cronbach's α is very high ranging from 0.82 to 0.93 with a median of 0.90. Items are reasonably homogenous and the overall measure of organisational commitment is relatively stable over short periods of time.

5.2.1. Strong Belief in Acceptance of the Organisation's Goals and Values

The overall model by Mowday et al. [21] is based on the need for an employee to remain in an organisation, illustrated through their level of emotional attachment to the organisation. The theory suggests that the psychological state of commitment displayed by an individual regarding their current position in an organisation is evident in their actions and in the manner in which they conduct their work in the organisation [55]. The employee develops an association with the organisation where they believe their goals are in line with those of the organisation. The manner in which an employee performs their work in the organisation is a clear depiction of their alignment with the vision and the mission of the company [56,57]. The success of the organisation to realise their goals revolves around the level of the employees' performance [58]. Through the process of conducting an OCQ measure with employees, the organisation will be in a position to establish an understanding of its ability to reach set goals based on the commitment of employees [21].

The scale created by Mowday, Porter & Steers [58] identifies questions that are intended to present a measure of an employee's commitment but have not been specifically grouped by the authors into sub-scales that provide a clear portrayal of the three related factors:

(1) a strong belief in and acceptance of the organisation's goals and values;

(2) willingness to exert considerable effort on behalf of the organisation; and

(3) a strong desire to maintain membership in the organization.

Mowday et al [21] stated that the aspect of belief in an organisation's goals and visions is essential in determining whether staff perform work on their own free will. The relaying of information in an organisation usually entails passing instructions from supervisors or management and the response offered by staff [59]. Apart from directives offered, there are general expectations of creativity in performing work which will enable the organisation to achieve its goals uniquely and requires a certain degree of commitment from staff in the organisation. The ability of employees to engage creatively is determined through this dimension of the OCQ model [58]. This aspect of the level of commitment of nursing staff in a healthcare organisation could demonstrate whether they employ critical thinking in patient care. This is an essential element of effective patient care and has a direct bearing on a healthcare system's costs and facilitates improved performance within the organisation [60]. Any organisation is always in a state of rebranding and re-establishing itself. Continual improvement in healthcare is often associated with patient safety initiatives and the values and support provided by the organisation for staff (Australian Commission on Safety and Quality in Health Care, 2010). For this to be successful, both the employees and the management of an organisation need to be thinking and behaving in the same fashion [61]. Conducting an organisational commitment measure where the aspect of the beliefs of the employees

is identified is essential in creating strategies and recognising new roles for the employees.

Meyer and Allen [27] described this factor of organisational commitment as affective commitment and how an employee may have an emotional attachment to organisation. There does appear to be some similarity to Mowday in that there needs to be a number of value characteristics associated with the employee in order for an affective commitment to be evident. Affective characteristics described by Meyer are related to involvement of employees in decision making and policy direction; and work experiences, which describe whether the employee feels comfortable in their role and if they also feel that they are competent at what they do.

5.2.2. Willingness to Make Considerable Efforts on Behalf of the Organisation

The OCQ model proposed by Mowday et al. [21] introduced this dimension which is used to establish whether the employee is prepared to extend themselves and make substantial additional efforts to help the organisation succeed [62]. The second factor in the OCQ scale determines loyalty of the employee when it comes to their dedication to the visions set for the organisation. The inclusion of this measure in the OCQ model is necessary for facilitating a holistic understanding of employee commitment [63]. This aspect forwarded by Mowday et al. [21] highlights that the level of commitment in the organisation can be measured through the determination of their intention to work with additional effort to benefit the organisation. Mowday applied transactional theory to justify this dimension of the OCQ model. It suggests that the actions of an employee are justified by the underlying expectation of reward based on their commitment [63]. From this an employee would feel that they have an obligation bestowed upon them to support the organisation [64]. Research suggests that it is prudent to measure this dimension of how much an employee exerts themselves on behalf of the organisation [64].

The need to measure the inclination towards making a substantial effort on behalf of the organisation is justified in that it provides an understanding of the potential for continued commitment of the employee to the organisation [21]. Although other factors may lead to their willingness to make considerable efforts, they are mostly motivated by their desire to remain with the same organisation [65]. By measuring this, the organisation will be in a position to establish the underlying reasons for their performance and determine the level of their motivation [66]. Within the nursing workforce this could possibly present an indirect measure of the level of motivation that nurses have toward their patient care. Patients can often get a sense of whether nursing interventions are provided with a level of care and respect for them. This could also reflect the level of whether a nurse personally considers that the care that they provide is making a difference to the healthcare outcomes for their patients.

Meyer and Allen [27] described this aspect of organisational commitment as behavioural commitment and how a worker performs to better to the organisation. There appears to be similarities between this factor of Mowday and the continuous commitment component described by Meyer. An employee who keen to perform better for the organisation would be categorized by Meyer within a continuous commitment component. Motivations such as pay rewards would lead to an employee feeling an obligation toward the organisation. Meyer and Allen [27] posited that the amount to which an employee is willing to exert effort is dependent on their behavioural commitment.

5.2.3. Strong Desire to maintain Membership in the Organisation

Employees who have been found to have less commitment on a long-term basis in an organisation tend to engage less which leads to numerous errors and conflicts in the work environment [65,67]. When an individual has no desire to exert effort for the organisation over an extended period, they tend to have occasional absenteeism and are prone to giving excuses for their misgivings. According to Yousef [68], individuals with a strong commitment to an organisation on a long-term basis shows fewer signs of fatigue and stress in the workplace and they have the propensity to avoid work-related disagreements with fellow workmates.

This dimension of the OCQ model by Mowday et al. [21] determines the principal reasons behind an employee's desire to have a long-term obligation to the organisation. The measure can assist an organisation to identify different elements in their structure that facilitate retention of employees [69]. The transactional theory suggests that employees feel the need to maintain their current position in an organisation based on the belief that they will encounter a considerable loss in investment which has accumulated in the course of their performance in the organisation [70]. The investment employees make in an organisation includes time, money and effort.

The transactional theory as it applies to this dimension of the OCQ scale suggests that employees fear the risk of losing these investments since there is also the absence of a guarantee of any future opportunities [71]. Through the identified factor in the OCQ scale, the organisation is in a position to determine which investments employees fear losing the most [72]. Also, the organisation can determine through the measure whether employees remain committed to the organisation based on the knowledge that they have accumulated money as retirement benefits which they fear losing hence the need to stay attached to the organisation [73]. Measuring the desire to maintain an extensive commitment with the organisation describes those who are risk-averse [74]. The measure is in line with the attitudinal commitment theory, which focuses on their perception of longevity.

5.3. Two Factor Assumption

Angle and Perry [2] specifically sought, through established factor analysis techniques, to confirm if the OCQ did indeed have three separate subscales that identified clearly the three factors described by Mowday. However, they established that there were only two latent factors that could be identified within this scale. They named them:

- Value Commitment and
- Commitment to stay.

This study reached similar findings as Al-Yami et al [1]. He reached these result after conducting a Parallel Analysis (Appendix B), which then confirmed these results by conducting a CFA.

Value Commitment Items [1,2]

Value commitment items from the scale related to pride and are associated with employee care for the organisation and how compatible the values of organisation are with those of the employee. The following table demonstrates how their chosen items in this subscale might meet the attributes of value.

Value Commitment Items [1,2]	Rationale
1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organisation be successful.	The wording of this item relates to a readiness to perform an effort that is more than expected and a show for concern for the organisation. Positive Work Experiences could produce greater effort and Personal Characteristics such as a need for achievement also align with this item.
2. I would recommend this hospital to my friends as a great place to work.	A recommendation to friends could imply a decision based on values as friends often have similar values. However, it could be argued that there is a slightly stronger emphasis placed upon an intention to stay as the question is a recommendation to join or become a member of the organization [75]. This item in addition, refers to a positive work experience. This could result from an indirect influence of organisational structure.
4. I would accept almost any type of job assignment in order to keep working for this organisation.	Obvious impression about staying with the organisation.
5. I find that my values and the organisation's values are very similar.	Overt congruence with the ideas of value
6. I am proud to tell others that I am part of this organisation.	Pride is a sign of value.
8. This organisation really inspires the very best in me in the way of job performance.	Shows the value of the organisation to the employee.
10. I am extremely glad that I chose this organisation to work for over others I was considering at the time I joined.	This question is asking about satisfaction with joining the organisation. Joining a group is directly associated with value. Being glad is an affective component but the object of the question is related to consideration of joining.
13. I really care about the fate of this organisation.	Caring is an affective attribute that aligns with a value.
14. For me this is the best of all possible organisations for which to work.	Does not have a very obvious affective component nor does it imply membership with the organisation

Angle and Perry [2] stated that Commitment to Stay items are based on membership itself unlike value commitment these items do not indicate an affective bond to the workplace. Etzioni's [76] has described these questions as measuring a "Calculative involvement".

Commitment to stay Items [1,2]	Rational
3. I feel very little loyalty to this organisation. Reverse scored (R)	Al-Yami's study was based on two settings one private hospital and one that was public There was a clear difference in the scores for this question in each of the two settings. Loyalty is often associated with remaining with a group
7. I could just as easy work for a different hospital as long as the type of work was similar. (R)	the actual type of work has a higher value than the current place where the work is conducted by the employee and shows no real incentive to stay
9. It would take very little change in my present circumstances to cause me to leave this organisation. (R)	Attitudes and readiness to leave represents how the employee wish to continue membership with the organisation is.
11. There's not too much to be gained by sticking with this organisation indefinitely. (R)	Retaining membership can return some benefit but does not imply personal improvement
12. Often I find it difficult to agree with this organisation's policies on important matters relating to its employees. (R)	Unquestioning acceptance of policy does not guarantee commitment. It is not difficulty so much as the person feels disassociated from the organisation.
15. Deciding to work for this organisation was a definite mistake on my part. (R)	There is no satisfaction in retaining membership with the organisation

5.4. Main Findings

5.4.1. Organisational Commitment Questionnaire Dimensions

The first main findings of this study are the outcomes of the Confirmatory Factor Analysis (CFA) test conducted. The CFA was used to test the model of fit with AL-Yami et al [1] for being the most relevant and recent study to nursing field. The same structural equation model was applied to the CFA, using AMOS version 22 in IBM, and agreed with Al-Yami's analysis that the Mowday OCQ has 2 factors: (i) Value Commitment and (ii) Commitment to Stay. The goodness of fit, comparative fit index, RMSEA and Chi-square as shown in Table 2, were acceptable (.904), (.888), (.70) and (138.1) respectively. The chi-square is quite high to be nearly double the degree of freedom. Based on these findings and the compatibility of the outcomes with Al-Yami et al [1] and Angle& Perry [2] the two factor analysis of the Mowday OCQ was confirmed with data for the current study. These findings were achieved after inter-correlating the error variances found between two question items:

- CQ9 It would take very little change in my present circumstances to cause me to leave this hospital.
- OCQ11 There is not much to be gained by sticking with this hospital in the long term (view Appendix A).

The rationale for the correlation of such variance was related to the either the measurement variables not identified in a way that made it easy for the participant to understand what was being asked, or that the two variables has similar or very close definitions to the reader [45].

5.4.2. Reliability Test

In order to check the reliability and stability of the factor structure, internal consistency was examined via conducting a Cronbach Alpha test. The alpha coefficient for the fifteen items of the OCQ is 0.833 which is considered "good" ([50], p. 354).

These set of statistical tests and better understanding of the OCQ question items has resulted in the current study accepting the first Null Hypothesis that the Organisational Commitment Questionnaire described by Mowday does not have three factors and instead has just two identified subscales within the instrument. This now has implications for how the research was answered. This was to understand if any relationship exists between the subscales of the OCQ instrument and the three published subscales of the Maslach Burnout Inventory (MBI).

The next part of this study examines the correlation between the two subscales of the OCQ and the three subscales of MBI. Research on burnout has shown that it has negative affect on worker attitude, such as organisational commitment [77]. Jackson, Turner, and Brief [78]; Leiter & Maslach, [79] reported that low organisational commitment level can result from burnout. On the contrary, Kalliath, O'Driscoll, and Gillespie [80] found that the reverse may be true where low organisational commitment could be a determining factor of burnout.

5.4.3. Maslach Burnout Inventory (MBI)

Burnout is termed as the psychological syndrome of emotional exhaustion, depersonalization, and decreased personal accomplishment which can happen in individuals working with other people in a similar capacity [79]. The Maslach Burnout Inventory (MBI) is an introspective psychological inventory which consists of 22 items pertaining to occupational burnout [81]. The original MBI had been constructed by Christina Maslach and Susan E. Jackson with the goal of assessing the experience of burnout in individuals. The MBI is a planned inventory for measuring three dimensions of burnout: (i) emotional exhaustion, (ii) depersonalization, and (iii) personal accomplishment [82]. This inventory takes about 10-15 minutes to complete and can be administered to groups or individuals. Each factor is important in the identification of burnout [83]. Burnout syndrome occurs when an employee feels emotionally exhausted or fatigued (emotional exhaustion), emotionally withdrawn from clients (depersonalization), and perceives a diminution of their accomplishments or achievements (personal accomplishment) [81].

MBI is a twenty-two item inventory, containing three scales: nine items related to Emotional Exhaustion (EE) in the first subscale; five items regarding Depersonalization (DE) in the second subscale; and eight items about Personal Accomplishment (PA) in the third. The Likert scale has seven levels that range from 0 = never, through to 6 = always. High levels of Emotional Exhaustion and Depersonalization that exist with a low sense of Personal Accomplishment indicates burnout. Combining the score of the three subscales of Burnout by measuring the high level of EE and D subscales with lower score of the PA is the way to calculate the levels of burnout. EE subscales scores $\geq$ 27 (high), 17-26 (normal), below 16 (low). The calculation of D subscales scores are $\geq$ 13 are considered high, 7-12 normal, below 7 are low. The PA calculations are if PA scores 0 – 31 are high scores, 32 -38 scores are normal, and scores $\geq$ 39 are considered low [84].

The Maslach Burnout inventory (MBI) was designed to examine impacts of burnout, and lack of accomplishment. The MBI uses a different subscale to measure each one of the three aspects of burnout. The Emotional Exhaustion (EE) subscales measures the feeling of being overextended and exhausted emotionally by one's work. The depersonalization (Dp) subscale assesses being unable to have feelings or being impersonal towards one's service, treatment, care or instructions. The Personal Accomplishment (PA) subscale measures the feeling of being successful and competent in one's work with others.

The Maslach Burnout Inventory has four different versions: (1) Human Services Survey for Medical Personal (MBI-HSS (MP)); (2) Educator Survey (MBI-ES); (3) General Survey (MBI-GS); and (4) General Survey for Students (MBI-GS (S)). The MBI-HSS (MP) is the most widely and originally used MBI version. It is well-designed for professionals working in the human services. It addresses three scales of emotional exhaustion, depersonalization, and personal accomplishment. MBI-HSS (MP) has been derived from the Human Services Survey certainly for Medical Personnel. It also has three subscales same as MBI-HSS. MBI-ES is known as the version of original MBI. It is used in educational settings including teachers, volunteers, administrators, and other staff members.

5.4.3.1. Emotional Exhaustion (EE) Subscale

The EE subscale in the MBI has 9 items that measure feelings of an individual being emotionally exhausted and overextended at one's work Maslach et al [85]. Emotional exhaustion is a chronic state of emotional and physical depletion which occurs due to excessive job and/or personal demands with consistent work stress. High scores in this scale denotes that the individual has burnout [85]. The EE scale is utilized in the four different versions of Maslach Burnout Inventory. (1) Human Services Survey for Medical Personal (MBI-HSS (MP)); (2) Educator Survey (MBI-ES); although the General Survey (MBI-GS) and General Survey for Students (MBI-GS (S)) utilize a shorter 5-item version of EE scale. Maslach described the highest factor loading (0.84 on frequency and 0.81 on intensity) for the item referring to burnout directly states 'I feel burned out from my work' [86]. Some of the component items in this subscale hold low loadings. The reliability coefficient for this subscale is .90. The standard error of measurement for this subscale is 3.80 which shows a high accuracy and reliability value [86,87].

The EE subscale assists in finding the relationship between physical fatigue and emotional exhaustion and the sense of feeling drained psychologically. The items in this subscale of MBI helps in finding if the individual is feeling used up by the end of the working day routinely and feels like being at the end of their rope whilst in the workplace and with their co-team members [88]. This subscale determines the presence of daily fatigue and feeling frustrated by their job. The items of this subscale present the individual's burnout level at his/her workplace and ranges between extreme and very low [89]. The subscale also measures the individual's ability to function productively in the workplace. If the individual appears to be strained or stressed with their work and colleagues it can be as a result of being emotionally exhausted [88].

This subscale is influenced by various determinants such as personal resources, emotional culture, coping strategies, and supervisory regulation of their workplace display or behaviour [86]. Workplace group norms distinguish how employees should express oneself. The individual can become emotionally exhausted when personal resources such as social support, status, money are not enough to prevent strain. Higher scores on this identify people with lower workplace autonomy, higher task complexity, and lower internal locus of control [88]. These people also have inadequate coping strategies. People with productive coping strategies score low on this subscale. Workplace emotional culture also makes a difference to scores obtained in this subscale [85]. People who work in an impulse-oriented culture score high on this subscale because they do not have enough time and resources to understand and evaluate the surrounding situations and have less personal control. However, people working within institutional-oriented cultures experience a degree of buffer against emotional exhaustion [88]. High scorers have lack of supervisory support as supervisors or managers pay less heed to the subordinate's interpersonal role needs. When the demands are more, and supportive resources are less, people feel emotionally exhausted, scoring high on the EE subscale of MBI [89].

5.4.3.2. Depersonalisation (DP) Subscale

The DP subscale of MBI has 5-items of Depersonalization which measures the impersonal response and lack of feelings towards the recipients of one's treatment, care, instruction, or service Maslach et al [85]. Higher scores in this subscale corresponds to greater levels of experienced burnout. This subscale is used in three versions of the inventory: MBI-HSS; MBI-HSS (MP); and the MBI-ES [85]. The item with highest loading in this subscale is: "treat patients as impersonal 'objects'". Only 2 items out of 5 items in this subscale have low loadings. The reliability coefficient for this subscale is .79. The standard error of measurement for this subscale is 3.16 [86].

This subscale measures the individual's burnout level through 5 different aspects. First, the subscale determines if the employee is burned out at work and if the employee treats patients/clients like objects with no feeling of connectedness or belongingness [88]. It measures burnout level on the basis of an employee's callous behaviour towards people. If a person is behaving callously towards others, they could possibly be experiencing a degree of strain [86]. The items identify if a person is feeling that his/her work is hardening his/her emotions and if the person does not really care about what happens to their clients [85]. If the employee is not bothered about their clients, they become detached from their work and job. Items in this subscale also identify depersonalisation through feelings that clients are blaming the individual for their own issues.

High scores on this subscale also indicate high levels of burnout at his/her workplace [86]. It identifies if the individual is at a stage where he/she is detached, in terms of his/her body or mind or being quite detached as an observer of oneself [88]. Very high scores in this subscale can indicate that the individual has a feeling of being changed and that their surrounding world has become dreamlike, less significant, less real or vague Maslach et al [85]. If this becomes extreme and consistent, the person can suffer from a depersonalization-derealization disorder. The person scoring high on the subscale of emotional exhaustion usually scores high on this subscale of depersonalization and can be an indicator of extreme burnout [86].

The high scorers on this subscale feel divorced from their personal self and start to lose their identity and emotional control and things seem hazy or unreal [88]. Several studies have reported that high scorers on this subscale also have self-breakdowns, higher anxiety levels that can turn into negative perceptions. This subscale is strongly correlated with the subscale of emotional exhaustion in MBI inventory [89].

5.4.3.3. Personal Accomplishment (PA)

The PA subscale of MBI inventory has total of the 8-items. This subscale measures the successful achievement and feelings of competence in one individual's work Maslach and Jackson [89]. Lower scores in this subscale define an individual's greater experience of burnout. This subscale is utilized within the versions of the MBI-Human Services Survey (MBI-HSS), MBI-Human Services Survey for Medical Personnel (MBI-HSS (MP)) and MBI-Educator Survey (MBI-ES) [85].

The reliability coefficient for this subscale is .71 which represent adequate level of applicability. The standard error of measurement for this subscale is 3.73. In contrast to the other two subscales of emotional exhaustion and depersonalization, lower mean scores correspond to higher degrees of the experienced burnout [86]. This subscale is completely independent of the other subscales. The component items of this subscale do not load negatively over them. In simple terms, Personal Accomplishment is not on the opposite side of the subscale of Emotional Exhaustion or/and Depersonalization [89].

The items listed in this subscale measure if the individual is able to easily acknowledge the feelings of patients; and can effectively deal with the problems of patients. Further, the items in this subscale measure if the person feels that they have a positive influence on other's lives and feel routinely feel depleted of energy [86]. The subscale items also measure if the person can easily build a relaxed atmosphere and feels good after their work with patients. The last two items of this subscale measure if the person has accomplished worthwhile elements in their job; and if the person is capable of dealing calmly with emotional issues [89].

This subscale identifies the level of pride that an individual has in themselves and their work. It measures the level of achievement or accomplishment that a person associates with themselves [85]. Higher scores in this subscale demonstrate that individuals feel that there is a good mix of achieving workplace goals and personal goals. This element in MBI inventory provides a measure of personal fulfilment [85]. This starts when the person starts to become conscious of oneself as well as one's surroundings. This is the time when one starts to explore the inner self and begins to realize their capabilities [89]. It is similar to the tentative steps of a child who invariably leads to fewer falls being followed by the step of accepting assistance from surrounding people. This is further followed by the joy of achievement after taking some successful steps without falling [86].

This subscale is efficient in helping the individual to identify if they have accomplished personally with greater fulfilment which is invariably followed by true sense of habitually and a yearning for the next horizon Maslach et al [85]. This is the only subscale measurement in MBI which reflects a person's deeper self-exploration [86].

5.4.4. Organisational Commitment and Burnout Correlation

This part of the discussion seeks to answer the second hypothesis and explore the relationship between organisational commitment measured by OCQ and Burnout as measured by MBI. Two different opinions exist regarding the relationship between organisational commitment and burnout. Initial studies posit that the level of burnout negatively affects worker attitudes that are reflected in their organisational commitment [77]. Others have shown that a low level of organisational commitment can result from a high level of burnout [78,79]. Alternatively, Kalliath, et al. [80] found that low organisational commitment could be a determining factor for burnout.

Leiter & Maslach's [79] study was conducted 74 of nurses and technicians (52 nurses and 22 technicians) comparing MBI subscales to the single OCQ measure as classified by Mowday et al [21]. Eginyurt et al [42] compared MBI subscales to the three OCQ subscales created by Meyer & Allan [27] on a variety of health workers from different professions. The study was conducted on 486 participants, including 128 nurses. It was concluded that the levels of organisational commitment described by Meyer are inversely related to burnout. They found that the affective commitment is the primary determinant of burnout.

The findings of this study demonstrate that although there is some subscale correlation, the relationship is not substantial. In Table 4, the correlation between OCQ and MBI results show that a high level of organisational commitment, including both value commitment and commitment to stay, is associated with low levels of burnout. These findings are compatible with Eginyurt et al [42] and Leiter & Maslach [79]. This means that nurses who are value committed to an organisation would show low levels of emotional exhaustion and depersonalization. High scores for each OCQ factor are negatively associated with the Emotional Exhaustion ($r = .202$ for VC, $r = -.286$ for CtS) and Depersonalization ($r = -.179$ for VC, $r = -.243$ for Cts) scales, but only a slightly positive association exists with this condition for Personal Accomplishment ($r = .249$ for VC, $r = .156$ for CtS). Similarly, a low level of organisational commitment is associated with higher scores on the EE and D scales but again there is no significant association with PA. It would follow from this that the second null hypothesis would be rejected and there is a relationship between at least two of the subscales of MBI with the Commitment to Stay subscale of the OCQ.

Personal accomplishment does not appear to influence organisational commitment. This is contrary to other assessments where PA can be considered to be influenced by a number of features that originate from the organisation. For example, Spooner-Lane and Patton [90] found that Personal Accomplishment could be affected by ambiguity of roles and boundaries. However, the potential reason for low correlation between organisational commitment and the personal accomplishment subscale of the MBI in this study could be that PA is obtained by nurses from a different source than from the organisation itself. Nurses enter the profession to care for their patients and not necessarily to become part of a reputable organisation. There can be a motivation to gain a range of different clinical experiences rapidly by working for a large metropolitan organisation but this may not be a career climbing strategy for all. It could be that nurses obtain a sense of personal accomplishment from the satisfaction of contributing to the well-being and care for their patients. This could then explain that, from the data obtained in this study, the subscale of Personal Accomplishment would have a relatively small relationship with the subscales of organisational commitment.

5.5. Limitations

Bivariate analysis has two main limitations for this study. First, it looks to the relationship between variables

but does not explore any effect of a third factor on those factors. In order to find this a Multivariate analysis would need to be conducted. Second, bivariate analysis does not support any explanation for why the two factors are correlated, it is merely describes how it happened. This could be explored by running explanatory analysis such as Multiple Linear Regression in order to infer a cause. This would be a preferred option, however time constraints prevented this in the current study.

The sample size for this study met the minimum requirement for conducting factor analysis [91]. However to conduct an exploratory Factor analysis another separate data set would be needed. The two samples should also take into consideration those who are experienced and newly employed. This may show that there are other indicators that influence organisational commitment or burnout such as age. Patrick and Lavery [92] conducted a random study on Australian nurses and concluded that the age of the nurse is inversely correlated with the EE and D subscales of burnout. Janssen, Schaufelioe, and Houkes [93] report that the association of PA and low self-esteem is discovered to be negative. Further work is needed to confirm other influences that affect the reasons for recruitment and retention of nurses in public hospitals.

5.6. Conclusion

This study is offers a novel approach to comparing organisational commitment OCQ subscales and MBI subscales that is applicable to the field of nursing. It has provided additional validation to the assumption of recent researchers that the OCQ described by Mowday has two factors. Health care services, either public or private, will be able to use this effective and reliable tool in order to measure the level of commitment. This will help nurses be the focus for organisations in order to reduce absenteeism and turnover. This will help create understanding of nurses' needs and make use of the findings to minimize negative outcomes. Outcomes from this study provide further support for nursing managers to understand the organisational factors that influence the level of burnout in nurses.

Acknowledgments

List of Abbreviations

OCQ	Organisational Commitment Questionnaire
MBI	Maslach Burnout Inventory
CtS	Commitment to Stay
VC	Value Commitment
AC	Affective Commitment
NC	Normative Commitment
CC	Continuous Commitment
EE	Emotional Exhaustion
D	Depersonalization
PA	Personal Accomplishment
CFA	Confirmatory Factor Analysis
RMSEA	Root Mean Square Error of Approximation

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Appendices

Appendix A: Organisational Commitment Questionnaire Scale

ORGANISATIONAL COMMITMENT SURVEY [21]

INSTRUCTIONS: Listed below are statements concerning your commitment to your work and your ward. Please read each statement carefully and indicate your choice of answer by placing the number which best represents your answer in the appropriate box for each statement.

1 = Strongly Disagree
2 = Moderately Disagree
3 = Slightly Disagree
4 = Neither Disagree nor Agree

5 = Slightly Agree
6 = Moderately Agree
7 = Strongly Agree

| |
|---|
| 1. I am willing to put in a great deal of effort beyond that normally expected in order to help this hospital to succeed. |
| 2. I would recommend this hospital to my friends as a great place to work. |
| 3. I feel very little loyalty to this hospital. |
| 4. I would put up with a lot of hassles in order to keep working for this hospital. |

5. I find that my values and the values of this hospital are very similar
6. I am proud to tell others that I am part of this hospital.
7. I could just as easy work for a different hospital as long as the type work was similar.
8. This hospital really inspires the very best in me in terms of job performance.
9. It would take very little change in my present circumstances to cause me to leave this   hospital.
10. I am extremely happy that I decided to work for this hospital instead of others.
11. There is not much to be gained by sticking with this hospital in the long term
12. Often, I find it difficult to agree with this hospital's policies on important matters relating to the people who work here
13. I really care about the future of this hospital.
14. For me this is the best of all possible hospitals for which to work
15. Deciding to work for this hospital was a definite mistake on my part.

Appendix B: Parallel Analysis

Parallel analysis

It is a technique that become widely known and used in the field of socio science. Parallel analysis contain a comparisons of the eigenvalue size values found in a haphazardly generated data set that have the same size [90]. In data analysis, it is important to choose the number of segments or factors to be used. While there are no set rules, there are common conventions. The purpose is to identify the best component to be retained which is considered to be the most accurate components through two standard practices. The first standard practice is to consider just those variables that have a fluctuation of components (or eigenvalues) of >1. This strategy is called the Eigenvalue Criterion Method. Another common practice is to utilise a scree plot in which eigenvalues are regularly employed. A scree plot is a two-dimensional plot with the number of components or factors on the horizontal pivot and eigenvalues on the vertical hub. Its function is to give a helpful visual guide when deciding on the most suitable number of components to consider. The plot demonstrates the part of the aggregate variance in the data affected by each factor. The scree plot enables one to pick the number of parts or factors based on the time when the "elbow", or partition, is observed or where a level starts (Figure below) ([94], p.869). In addition, SPSS does the new calculation using Monte Carlo file on the data to create random eigenvalue (criterion value). Then, if the criterion value from parallel analysis is greater than the first eigenvalue, the factor is rejected, if lower the factor will be accepted and retained. The parallel analysis support researcher decision from scree plot either to retain or reject factors [90].
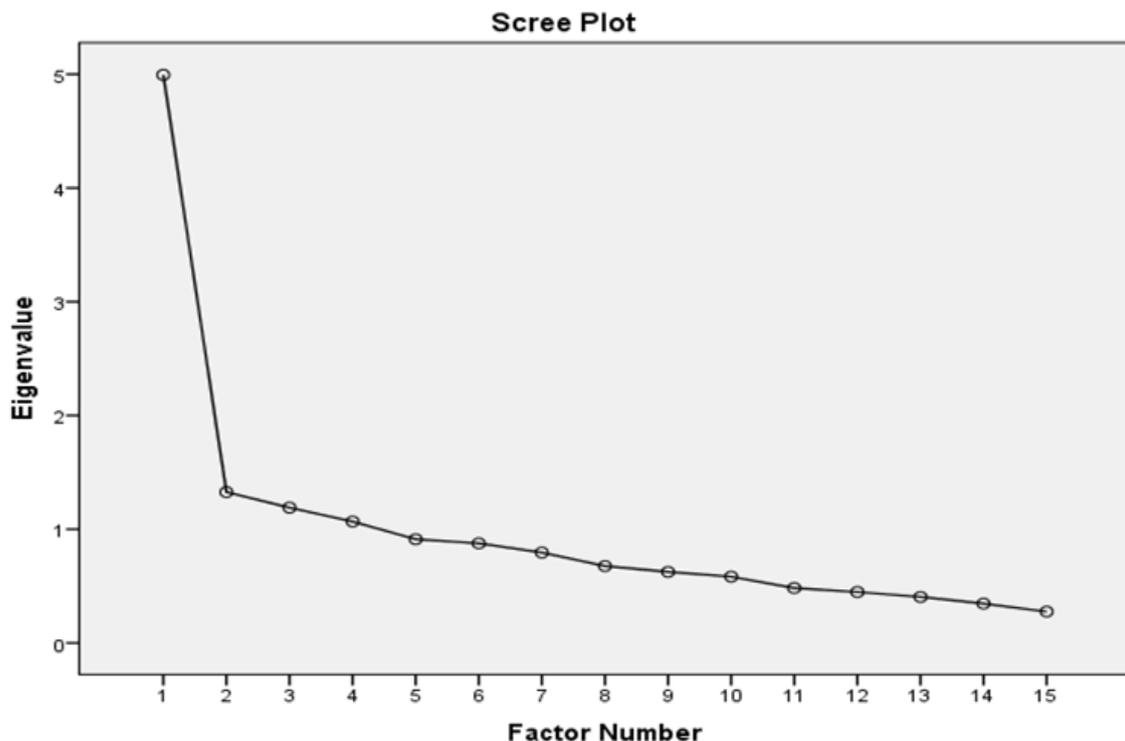
Eigenvalue on the vertical axis (b) the number of factors on the x-axis (c) the elbow here is the second plot which indicates that the first plot is to be extracted.

Appendix C: Model of Fit for the Confirmatory Factor Analysis of the OCQ scale for Al-Yami et al (2018)

Model of Fit for the Confirmatory Factor Analysis of the OCQ scale for Al-Yami et al (2018)

Al-Yami Fit index	Value
GFI	.91 (.85)
CFI	.93 (.85)
RMSEA	.07 (.11)
Chi-Square	158.22 (267.24) (df=71) p<.0001

Appendix D: Correlation between Error Variances of the organisational commitment Questionnaire Items

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

			M.I.	Par Change
e12	<-->	e13	8.341	.504
e11	<-->	e14	4.298	.516
e7	<-->	e14	7.326	-.426
e7	<-->	e13	4.588	.256
e5	<-->	e11	5.123	-.460
e4	<-->	stay	4.250	-.186
e4	<-->	e14	8.557	.557
e4	<-->	e12	10.153	-.590
e4	<-->	e6	5.434	.356
e3	<-->	stay	6.924	-.281
e3	<-->	e13	7.138	-.457
e3	<-->	e9	4.522	.373
e2	<-->	e7	5.669	.270
e1	<-->	e8	5.266	.247
e1	<-->	e2	5.359	-.288

Note: e12 and e13 were covaried to produce the final model.