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A programme to reduce burnout among hospital nurses in Gaza-Palestine

A thesis submitted to the University of Witwatersrand in fulfilment for the degree of PhD in the Faculty of Health Sciences

2013

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ABSTRACT

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A programme to reduce burnout among hospital nurses in Gaza-Palestine

Supervisor: Dr Gayle Langley

Background: This thesis concerns an investigation into burnout among hospital nurses in the Gaza Strip-Palestine. The purpose of this study was to explore the prevalence and nature of burnout in a population of nurses in Gaza-Palestine and then to develop a strategy for reducing burnout and test its effectiveness. From this purpose a number of research objectives were set and from those objectives, a number of research questions were established.

Method: A quantitative survey design was employed as the method for data collection, with a self-administered questionnaire pack being the data collection technique. Data were collected on burnout using Maslach Burnout Inventory (MBI). Demographic data were also collected. Data were analysed using a variety of descriptive and inferential statistical methods using the SPSS system version 17. In particular, parametric and non-parametric tests of comparison were employed. The burnout assessment was stratified into three levels (high, moderate, and low). Thirty participants of each level of burnout (15 interventions, and 15 controls) were randomly chosen on the base of 1:1 assignation, provided that they agreed to participate in part two of study. The control groups were assured that they would receive the same burnout reduction programme if found to be effective. The intervention programme consisted of 9 sessions and was provided for each intervention group separately. After completing the programme, the same questionnaire (MBI) was applied for intervention and control groups to check the effectiveness of the programme.

Sample: The study population in this study is the entire cohort of nurses who are working in 16 hospitals in Gaza (n=1801). Only 1500 nurses were asked to complete a questionnaire pack, and 1330 packs were returned and used in analysis with response rate=88.7%.

Results: The results of this study revealed a high prevalence of burnout (EE=44.9%, DP=53.6%, Low PA=58.4%). Emotional exhaustion (EE) was significantly associated with gender, hospital type, night shifts, and specialisation. Depersonalisation (DP) was significantly associated with hospital type extra time, night shifts, experience and specialisation. Low personal accomplishment (LPA) was significantly associated with hospital type, night shifts, and experience.

The burnout reduction programme was effective with moderate and severe burnout but not with low levels of burnout.

Conclusion: Being a nurse in Gaza hospitals appears to be a stressful experience. Continuation of this burnout reduction programme or a similar process is recommended to reduce burnout among Palestinian nurses in Gaza.

DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously, in its entirety or in part, submitted it to any university for a degree.

Bashir Alhajjar

21st October, 2013

ACKNOWLDEGMENTS

This thesis would not have been possible without the contribution and help from a number of people, who have been involved at some point with this thesis. In particular, I thank Dr Gayle Langley (my supervisor), Prof. Judith Bruce and Dr Sami Abu Izhaq for their advice, comments, attention to detail, and un-swerving support and confidence in the thesis. I am particularly grateful to Mr. Khalil Shagfa, Director of the Nursing Department without his support it would not have been possible to do this degree, and Talaat Almofti, for their kind help during the period of data collection. I would like to express my appreciation to Prof. Farouk Abdelsalam, Dr Omar Zo'rob, Dr Imad Chobaki and Dr Ayman Elasam for their continuous support and encouragement.

Also, I owe much to all staff members at Gaza hospitals mainly Mr. Taleb Abu Meala, Deputy Director of Nursing at Shifa hospital, and Saleh Alhams, Director of Nursing at Emirati Red Crescent hospital, Abdelraheem Shagoura, Ma'roof Alaskary, Abdelmutaleb Alkahloot and Fadi Alhaw. My deep appreciation goes to my brother Munir for helping in data collection. I acknowledge the enormous efforts for all staff members at the hospitals in Gaza Strip. It is with pleasure that I acknowledge the invaluable help and support to all staff members.

DEDICATION

To the souls of my father and my mother

To my wife

To my child, Fathiya

To my brothers and sisters

And

To my Palestinian people who love freedom and peace

To all of them I dedicate this work

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LIST OF ABBREVIATIONS

ALOS	The Average Length of Stay
ANOVA	Analysis of Variance
BM	Pines' Burnout Measure
CBI	Copenhagen Burnout Inventory
DP	Depersonalisation
EE	Emotional Exhaustion
ER	Emergency Room
GS	Gaza Strip
ICU	Intensive Care Unit
MBI	Maslach Burnout Inventory
PA	Personal accomplishment
PMOH	Palestinian Ministry of Health
ProQOL R-IV	Professional Quality of Life: Compassion Satisfaction and Fatigue Subscales, R-IV
RN	Registered Nurse
SA	South Africa
S-MBM	Shirom-Melamed Burnout Model
SMBQ	Shirom-Melamed Burnout Questionnaire
SPSS	Statistical Package of Social Science
Km^2	Square Kilometres
UK	United Kingdom
UNRWA	United Nation Relief and Works Agency
US	United States of America

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CHAPTER 1

INTRODUCTION

1.1 Background

In general, the nursing population is a community that experiences burnout due to the nature of the occupation (Baba & Jamal, 2000). Evidence suggests nursing has become increasingly stressful occupation, placing nurses at greater risk of illness (Lunney, 2006). Vahey, Aiken, Sloane, Clarke & Vargas (2004) concluded that as nurse workloads increase, nurse burnout and job dissatisfaction become greater factors in the voluntary turnover that leads to understaffing of hospitals. Yunus, Mahajar, Idris & Yahya (2009) underlined that nursing burnout has been closely related to both the absenteeism of nurses from work and abandoning nursing as a career, and results in poor patient care. Burnout develops when an individual no longer finds any meaning in his or her work (Malach-Pines, 2000).

Gaza Strip is a narrow piece of land lying on the coast of the Mediterranean Sea. It is a very crowded place with area 365 Km^2 (Square Kilometres) and constitutes 6.1% of the total area of Palestinian territory land (Palestinian Ministry of Health 'PMOH' Report, 2006). In the mid-year of 2008 the population number was 1,486,81 mainly concentrated in the cities, small villages, and eight refugee camps that contain two thirds of the population of Gaza Strip (United Nations Relief and Works Agency 'UNRWA', 2009).

The Gaza Strip was under the British mandate until 1948, then under Egyptian rule until 1967 when occupied by Israeli forces which remained there until the arrival of the Palestinian Authority (PA) in 1994. Israel retained its military presence as well as the

settlements until the year 2005 when the unilateral withdrawal was completed. The Palestinian legislative elections took place in 2006 when 'Hamas' won a majority of seats, but many countries, especially Western ones, and particularly the United States of America did not endorse these results. As a result, sanctions were imposed on the Gaza Strip. These sanctions influenced many areas, particularly the health of residents. After conflict erupted between the main two factions in Gaza, 'Fatah' and 'Hamas' that resulted in a number of dead and wounded, Hamas was able to resolve the matter to its advantage and to control the entire Gaza Strip.

In December 2008, Israel started the war against Gaza for 22 days. Many people were killed or wounded and infrastructure in Gaza was destroyed (Al Mezan Centre, 2010: 6-9).

Gaza Strip has three main general governmental hospitals and 14 smaller governmental and non-governmental hospitals with different specialties. The total number of hospital nurses in Gaza during 2007 was 1801 nurses, and the biggest hospital is 'Shifa hospital' in which more than 500 nurses are employed.

There is an abundance of literature in relation to nursing burnout but nothing has been undertaken in Gaza. It is especially important to look at Gaza given the conditions in which many nurses are required to work after the war. Some of the factors which may lead to stress and burnout include; traumatic wounds sustained by people whom they are required to care for, the lack of salary as a result of the economic restrictions which affects the salary of newly employed nurses, a lack of medical supplies especially drugs, political insecurity and political conflict between Palestinian factions

Medland & Howard-Ruben (2004) suggested that nursing leadership in oncology practice, recognising the potential for stress and burnout inherent in the nursing

profession, should research and develop programmes to enhance staff coping skills and mutual support. Rafii, Oskouie & Nikravesh (2004) suggested that the powerful effect of positive personal characteristics and their sensitivity to long standing and intense organisational pressures suggest approaches to executing stress reduction programmes and refreshing the nurses' morale by giving more importance to ethical aspects of caring.

A complex framework will be used to guide the development of an intervention to reduce burnout in nurses developed by the Medical Research Council, in the United Kingdom (2000: 3-5).

1.2 Global burden of the problem

Nursing is considered as a risk profession with high levels of stress and burnout (Garrosa, Rainho, Moreno-Jimenez & Monteiro, 2010). A significant increase in work-related burnout among nurses working was observed (Faller, Gates, Georges & Connelly, 2011), particularly among those who were directly caring for patients in hospitals and nursing homes.

Burnout among nurses is significantly correlated with job dissatisfaction (Hamaideh, 2011; Abushaikha & Saca-Hazboun, 2009). Many nurses leave the profession as a result of burnout (Badr, Rizk & Farha, 2010; El-Jardali, Alameddine, Dumit, Dimassi, Jamal & Maalouf, 2011; Sherring & Knight, 2009).

Nurses' occupational stress may cause excessive psycho-physiological responses, mental distress and burnout (Healy & McKay, 2000; Xie, Wang & Chen, 2011), and may adversely affect their job performance (Ashtari, Farhady & Khodaee, 2009;

Hirokawa, Yagi & Miyata, 2002) and productivity (Ugur, Acuner, Goktas & Senoglu, 2007; Nayeri, Negarandeh, Vaismoradi, Ahmadi & Faghihzadeh, 2009).

The consequences of occupational burnout can affect patient care (Poghosyan, Clarke, Mary Finlayson & Aiken, 2010; McHugh, Kutney-Lee, Cimiotti, Sloane & Aiken, 2011). Nurses who were deemed to suffer from occupational burnout made nursing errors more than their colleagues who were deemed not to suffer from burnout (Dong-mian, Yan-fang & Hui-min, 2010).

Nurses' health can be affected physically (Harwood, Ridley, Wilson & Laschinger, 2010; Thorsen, Teten Tharp & Meguid, 2011), and psychologically (Tomas-Sabado, Maynegre-Santaularia, Perez Bartolome, Alsina Rodriguez, Quinta Barbero & Granell-Navas, 2010; Wu, Li, Tian, Zhu, Li & Wang, 2011).

A significant link was found between the quality of work environments and nurse burnout (Klopper, Aiken, Coetzee, Bester & Pretorius, 2011; Kiekkas, Spyratos, Lampa, Aretha & Sakellaropoulos, 2010).

Two main factors were identified as contributing to burnout in nurses: low supervisory and organisational support (Bobbio, Bellan & Manganelli, 2012; Pisanti, Van der Doef, Maes, Lazzari & Bertini, 2011; Lu, 2008), and work overload (Girgis, Hansen & Goldstein, 2009; Fichter & Cipolla, 2010). Other factors may include non-satisfactory relations with physicians (Kiekkas, Spyratos, Lampa, Aretha & Sakellaropoulos, 2010; Malliarou, Moustaka & Konstantinidis, 2008), compassion fatigue (Elkonin & Van der Vyver, 2011), personality traits and empathy (Brouwers & Tomic, 2000; Zellars, Perrewe & Hochwaiter, 2000), lack of professional recognition (Lee & Akhtar, 2007), effort-reward imbalance (Pratt, Kerr & Wong, 2009), employment insecurity (Taylor &

Barling, 2004), and losing interesting in work (Silvia, Gutierrez, Rojas, Tovar, Guadalupe, Tirado, Araceli, Cotonieto & Garcia, 2005).

Many nurses who find it difficult to cope with the challenges and achieve the expected level of performance will invariably have stress and burnout (Ahmad & Oranye, 2010) and, if confronted with high work overload, will undergo depersonalisation (Yunus et al, 2009).

For more understanding of mechanisms of burnout among nurses, different models of burnout will be reviewed in the next section which discusses the theoretical framework of this study.

1.3 Theoretical framework of the study

Despite efforts over the last years to define burnout, a clearly agreed upon definition does not exist (Shukla & Trivedi, 2008). Four main reasons for the difficulty in defining burnout could be detected when reviewing the literature. The first reason is little agreement on the development of burnout and which stages are included in this development (Burisch, 2006) as there are different definitions of burnout in the literature (Zbryrad, 2009). The second reason is that the term includes many symptoms (Bakker, Demerouti & Schaufeli, 2005), which makes it difficult to differentiate between burnout and other psychological problems such as depression, stress, and compassion fatigue. The third reason is that burnout is a process and not an event (Halbesleben & Buckley, 2004). This means that process experienced is not the same for each person while the symptoms of burnout are unique to the individual depending on the circumstances. The fourth reason is the literature on burnout lacks empirical research to differentiate relationship of personal accomplishment with the other

components of burnout (Schaufeli, 2003) due to the complexity of the phenomenon and the overlap to other concepts (Burisch, 2002).

Burnout as a concept was first described in the 1970s and originally referred to a reaction to interpersonal stressors on the job (Schaufeli, Leiter & Maslach, 2009). It was defined by Freudenberger as a situation where the person failed, wore out or became exhausted by excessive demands on energy, strength or resources (Jacobs & Dodd, 2003). It was defined by Maslach & Jackson as involving three aspects: emotional exhaustion, depersonalisation, and reduced personal accomplishment (Maslach, Schaufeli & Leiter, 2001).

The terms job burnout, professional burnout, and occupational burnout are interchangeable (Ahola, 2007) because jobs, professions and occupations are indistinguishable concepts. Burnout at work can be defined, according to Freudenberger, as a state of mental and physical exhaustion caused by one's professional life (Kraft, 2006). Burnout is a syndrome of emotional exhaustion, depersonalisation (a disconnection from co-workers), and a reduced sense of personal accomplishment (Pines & Keinan, 2005) that can occur among individuals who work with people on a daily basis (Halbesleben, Wakefield, Wakefield & Cooper, 2008). Burnout is a psychological syndrome that may emerge when employees are exposed to a stressful working environment, with high job demands and low resources (Bakker & Demerouti, 2007).

Burnout may manifest different symptoms that affect the nurse, patient, family, and others. Bakker et al (2001) concluded that burnout is contagious as negative feelings and cynical attitudes spread from one staff member to another. Kotzer, Koepping & LeDuc (2006) summarised symptoms of burnout in nurses as frustration, anger, depression, irritability, cynicism, bitterness, negativity and compulsivity. Taylor &

Barling (2004) summarised other signs and symptoms of burnout: exhaustion, tiredness, anger, self-criticism, cynicism, negativity and irritability, feeling of being under siege, frequent headaches, gastrointestinal problems, weight decrease or increase, lack of sleep, symptoms of depression, breathing difficulty, doubt, helplessness and risk taking.

According to Ladstatter & Gorrosa (2008), burnout symptoms can be classified into five categories. The first category is 'affective symptoms' which include tearful and depressed mood, low spirit, decreased emotional control, undefined fears and nervousness, and exhausted emotional resources. The second category is 'cognitive symptoms' which include feeling helpless, hopeless and powerless, fear of going crazy, impaired concentration, being forgetful, making numerous minor mistakes and errors in letters, files, notes, meetings, and interviews, rigidity in thinking increases, sense of failure, insufficiency, and impotence. The third category is 'physical symptoms' which include indefinite physical distress complaints including headaches, nausea, and dizziness, sudden loss or gains of weight, sleep disturbances, sexual problems, and the most common symptom chronic fatigue. The fourth category is 'behavioural symptoms' which include aggressive with increasing conflict both at work and elsewhere, socially isolated and more withdrawn, perception of lack of satisfaction, performance, and ability, more cigarette and alcohol consumption. Maslach et al (2001) suggested easily observed reduction of personal and work effectiveness, poor work performance, and greatly reduced productivity. The fifth category is labelled 'motivational symptoms' which includes lack of motivation, losing of enthusiasm, interest, and idealism, developing of disillusionment, disappointment and resignation set in.

Burnout is distinguished from occupational stress even the terms burnout and stress were used interchangeably in several studies (Rush, 2003; McDonald-Fletcher, 2008). Burnout is considered to be a chronic type of stress at work that exceeds the limits of

the person's ability to control or cope with stressors and as a result, lead to burnout (Schaufeli, 2003; Ahola, Honkonen, Isometsa, Kaolimo, Nykyri, Koskinen, Aromaa & Lonnqvist, 2006; Sanders, 2001: 46). Stress can be positive or negative, but burnout is definitely and entirely negative. Burnout is most often the result not of stress alone but of unmediated stress, or of being stressed and having no effective strategies, no buffers, no support system, and no adequate rewards (Landeche, 2009; Hutman, Jaffe, Segal, Kemp & Dumke, 2005). Stress can produce energy and urgency, but burnout produces a sense of helplessness and hopelessness (Espeland, 2006). A significant relationship exists between occupational stress and burnout (Hsu, Chen, Yu & Lou, 2010; Arıkan, Koksal & Gokce, 2007; Kennedy, 2005).

Also, burnout and compassion fatigue share similarities but they are separate concepts (Najjar, Davis, Beck-Coon & Doebbeling, 2009; Yoder, 2010). Burnout arises when assertiveness-goal achievement intentions are not met, while compassion fatigue evolves when rescue-caretaking strategies are unsuccessful (Valent, 2002). Burnout stems from conflict within the work setting (Aycock & Boyle, 2009; Alkema, Linton & Davies, 2008; Potter, Deshields, Divanbeigi, Berger, Cipriano, Norris & Olsen, 2010). Conflicts can include disagreements with managers or co-workers, dissatisfaction with salary, or inadequate working conditions. Compassion fatigue originates from relational connections nurses have with their patients or the patient's family. It stems from emotional engagement and interpersonal intensity associated with witnessing tragedy within the work setting (Potter et al, 2010; Sabo, 2008). Burnout usually evolves over time, but compassion fatigue may have a more acute onset. While the nurse with burnout gradually withdraws, the nurse with compassion fatique tries harder to give even more to patients in need (Boyle, 2011).

One can conclude that it is difficult to define burnout for several reasons. Burnout has many symptoms that affect the nurse physically, emotionally and psychologically. Stress, compassion, and burnout are different terms with special relationships between them.

There are different conceptual approaches toward the construct of burnout reviewed here. These conceptualisations were proposed by Maslach and her colleagues, by Pines and her colleagues, by Shirom and Melamed and finally by Leiter.

1.3.1 Pines' Burnout Model

This model defined burnout as the state of physical, emotional and mental exhaustion caused by long-term involvement in emotionally demanding situations (Pines & Aronson, 1988: 9). This approach did not restrict the application of the term burnout to the helping professions, but was applied to employment relationships, organisational careers, to marital relationships and to the aftermath of political conflicts (Shirom & Melamed, 2005). Shirom (2010) underlined that burnout in Pines' model was viewed as a syndrome of co-occurring symptoms that include helplessness, hopelessness, entrapment, decreased enthusiasm, irritability, and a sense of lowered self-esteem. The Pines' Burnout Measure (BM) is considered a one-dimensional measure yielding a single composite burnout score (Schaufeli & Enzmann, 1998). In addition, researchers described the BM as an index of psychological strain that encompasses physical fatigue, emotional exhaustion, depression, anxiety, and reduced self-esteem (Shirom & Ezrachi, 2003).

1.3.2 Shirom-Melamed Burnout Model (S-MBM)

This model formulated by Shirom (1989) was based on Hobfoll's (1998) Conservation of Resources (COR) theory. Burnout is viewed as an affective state characterised by one's feelings of being depleted of one's physical, emotional, and cognitive energies. The basic tenets of the COR theory are that people have a basic motivation to obtain, retain, and protect that which they value. These values are called resources and have several types, including material, social, and energetic resources. The conceptualisation of burnout in this model relates to energetic resources only, and covers physical, emotional, and cognitive energies. Burnout thus represents a combination of physical fatigue, emotional exhaustion, and cognitive weariness (Hobfoll & Shirom, 2000). Stress at work occurs when individuals are either threatened with resource loss, lose resources, or fail to regain resources following resource investment (Hobfoll, 2001). Stress does not occur as a single event, but rather represents an unfolding process, so individuals who lack a strong resource pool are more likely to experience cycles of resource loss. The affective state of burnout is likely to exist when individuals experience a cycle of resource loss over a period of time at work (Shirom & Ezrachi 2003).

1.3.3 Leiter's Model

Leiter's model is a model that depends on Maslach Burnout Inventory (MBI) components and helps for more understanding of burnout. Leiter developed his model through the use of structural equation modelling, which allows one to test the distinct contribution of various organisational measures while maintaining the MBI's three factor structure, and also to explore the impact of one component of burnout on the other two components (Burke & Richardsen, 2001). The model suggests that in order to

prevent development of burnout, it is necessary to target the stressors that directly influence emotional exhaustion, which may include adjusting the workload, relocating tasks, designing ways to decrease interpersonal conflict, increased sense of competence by appropriate training, coping skills, increasing autonomy, and individual staff counselling and cognitive training to enhance efficacy (Leiter, 1992).

1.3.4 The Maslach Burnout Model

Burnout, in this model is distinguished from other established burnout models by the concurrent measurement of three unique dimensions: emotional exhaustion, depersonalisation, and a decreased sense of personal accomplishment (Wilkerson & Bellini, 2006). Emotional exhaustion refers to feelings of being depleted of one's emotional resources, which is considered as the basic individual stress component of the syndrome (Maslach et al, 2001). Depersonalisation (cynicism) refers to a negative, hostile or excessively detached response to the job and usually develops in response to the overload of emotional exhaustion (Maslach & Leiter, 2000). The third dimension was re-labelled as reduced efficacy or ineffectiveness, depicted to include the self-assessments of low self-efficacy, lack of accomplishment, lack of productivity, and incompetence (Leiter & Maslach, 2001). Reduced personal accomplishment represents a decline in one's feelings of competence and achievement at work (Schwarzer & Hallum, 2008).

In this study, demographic variables (gender, age, qualifications, experience, specialisation, salary, marital status, night shifts and extra work) and the content of the burnout reduction programme were used as independent variables. Burnout levels before and after the burnout reduction programmes were used as dependent variables.

1.4 Region of study: Gaza Strip (GS)

1.4.1 Demography

Gaza Strip is a narrow piece of land lying on the coast of the Mediterranean Sea (see figure 2). Its position on the crossroads from Africa to Asia made it a target for occupiers and conquerors over the centuries. The last of these was Israel who occupied the Gaza Strip from Egyptians in 1967. It is a very crowded place with area 365 Km^2 and constitutes 6.1% of total area of Palestinian Territory Land (PMOH Report, 2006). In mid-year of 2008 the population was 1,486,816 (sex ratio of males to females is 1:1.025) mainly concentrated in the cities, small villages, and eight refugee camps that contain two thirds of the population of Gaza Strip. In Gaza Strip, the population density is 4,073 inhabitants/Km^2 that comprises the following main five governorates:

North of Gaza constitutes 17% of the total area of Gaza strip and 1.0% of total area of Palestinian territory area with area 61 Km2. The total number of the Palestinian population living in North Gaza is 286,246 individuals with a population density of 4,693 persons per square kilometre.

Gaza City constitutes 20.3% of the total areas of Gaza strip and 1.2% of total area of Palestinian territory area with area 74 Km^2. The total number of the population living in Gaza City is 519,027 individuals with a population density of 7,014 persons per square kilometre.

Mid-Zone constitutes about 15% of the total area of Gaza Strip and 1.0% of total area of Palestinian territory area with area 58 Km^2. The total number of the population living in Mid-Zone is 215,808 individuals with a population density of 3,721 persons per square kilometre.

Khan-Younis constitutes about 30.5% of the total area of Gaza strip and 1.8% of total area of Palestinian territory area with area 108 Km^2. The total number of the population living in Khan-Younis is 283,286 individuals with a population density of 2,623 persons per square kilometre.

Rafah constitutes about 16.2% of the total area of Gaza strip and 1.1% of total area of Palestinian territory area with area 64 Km^2. The total number of the population living in Rafah is 182,449 individuals with a population density of 2,851 persons per square kilometre (Palestinian Central Bureau of Statistics, 2009; Palestinian Health Information Centre, 2010: 18).

According to the UNRWA statistics in 2010, the total number of registered refugees in Gaza Strip was 1,106,195 with percentage over 70% from the total population in Gaza Strip (www.unrwa.org).

With a population numbering 1.5 million, Gaza is one of the most densely populated areas in the world. The life in Gaza is very stressful particularily after two wars in 3 years and continuous siege for 7 years. This will add more stress to the stress that result from being a nurse working in one of Gaza hospitals.

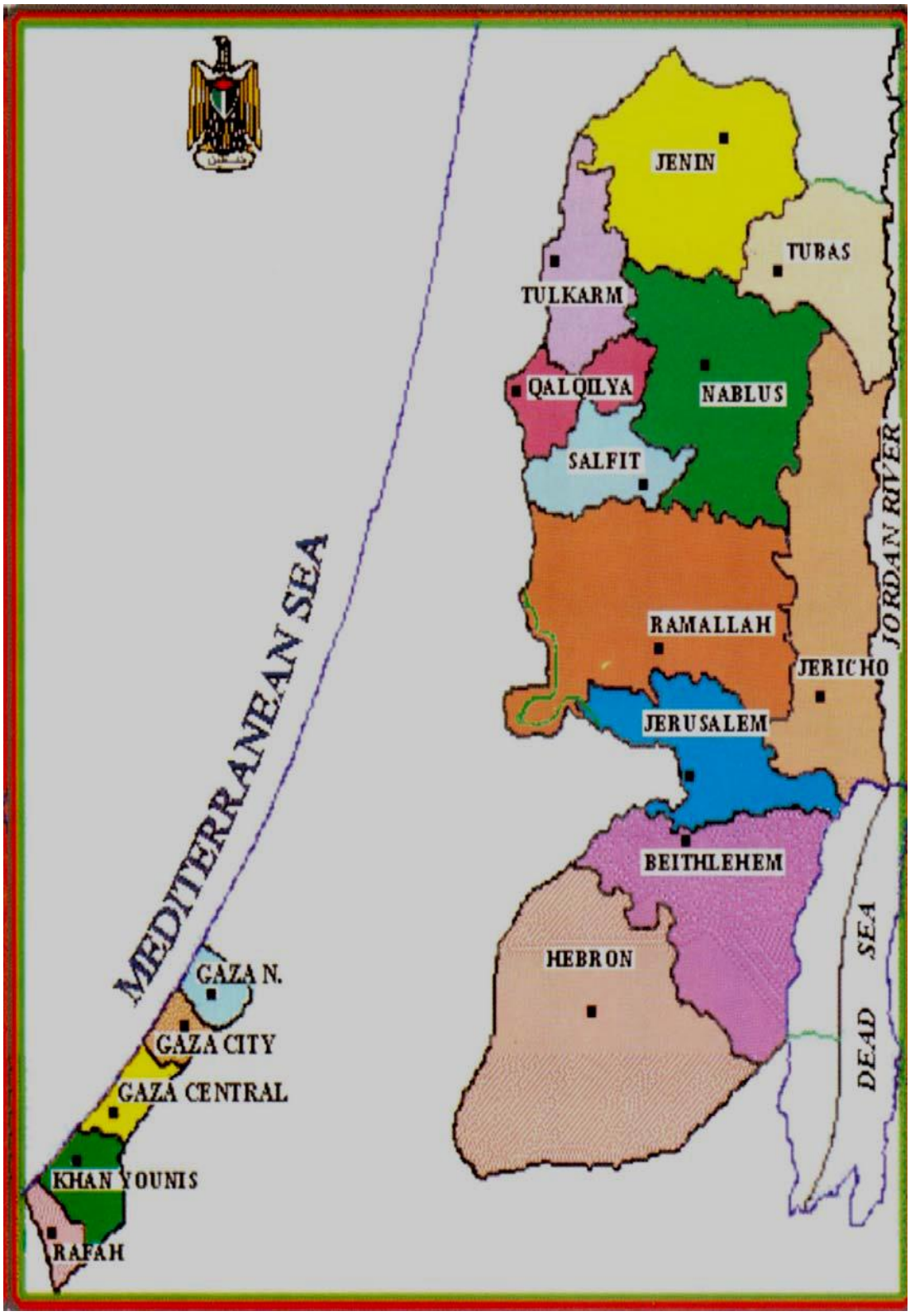


Figure 1-1: Political map of the Gaza strip and West Bank that lies under the control of the Palestinian Authority (PA) (Reproduced from Palestinian Ministry of Health (PMOH), 2006)

1.4.2 The current situation in Gaza

In August, 2005 the Israel forces evacuated the occupied Gaza Strip, including all existing Israeli settlements and all military installations which then redeployed outside the Gaza Strip. As this plan maintained Israeli control of the Gaza borders, this made it extremely difficult for those in Gaza to move freely (Al Mezan Centre, 2008: 15). As a result of the last Israeli offense against Gaza after retreating, 1,334 Palestinians were killed (14 of them were medical staff), and 5,450 were injured. Many health centres and ambulances were damaged in the war (Palestinian Centre for Human Rights, 2009), which resulted in more pressure on nurses.

As a result of the last war on Gaza (December, 2008-January, 2009) and continuation of blockade, the number of people who suffer from stress and other mental problems increased dramatically. They need psychosocial intervention, but unfortunately there are few resources to help them (Middle East Council of Churches, 2010: 38). A great effort is required to help the people in Gaza in coping with their experiences and rebuilding their lives (Mental Health and Psychosocial Support (MHPSS), 2009).

1.4.3 Types of hospitals in Gaza

Ministry of Health hospitals (MOHH)

The Ministry of Health (MOH) owns and operates 14 hospitals in Gaza Strip, furnished with 1,499 beds. The MOH is responsible for a significant portion of the secondary healthcare delivery system (60-70% of general and specialised hospital beds) and more than this proportion in hospital services (about 70% of hospital services) (MOH Report, 2006).

The MOH hospitals offered 425,947 hospitalisation days in the Gaza Strip. The MOH hospitals received 297,098 admissions (69.3% of the total admissions in Palestine). The number of admissions in 2004 was 288,450 cases in all MOH hospitals, which means that the admissions in 2005 increased with 8,648 cases (3%). Including the Emergency hospitals and psychiatric hospitals the MOH hospitals occupancy rate during 2005 was around (76.3%) of their full bed occupancy. The occupancy rate for the Emergency and psychiatric hospitals was 79.5% and 47.1% respectively.

The non-Ministry of Health hospitals' occupancy rate was 78.6%. Apart from mental and emergency hospitals, the average length of stay (ALOS) was 2.6 days. The longest ALOS was recorded at 4.1 days, while the shortest was 1.6 days. The length of stay in the mental hospitals averaged 15 days, while in the emergency hospitals it was 1.6 days. During the year 2005, about 60,199 deliveries were recorded in the Palestinian MOH hospitals (Gaza and West Bank), out of which 52.3% were reported in the Gaza Strip. The Caesarean Section deliveries constituted 16.1% of the total deliveries in the Palestinian MOH hospitals (Gaza and West Bank), while in Gaza Strip the rate was 15.3%.

The total number of beneficiaries from out-patient clinics was 805,189 with an increase of (7.1%) from the year 2004. Some of 64.8% of consultations were offered through the MOH hospitals in Gaza Strip which means those services were more accessible and utilised in GS. The MOH hospitals received 1,074,059 care seekers, with an increase of (10%) in comparison with the year 2004. This was due to the continuous emergency conditions in Palestine (MOH Report, 2006). There are 4 working haemodialysis centres in Gaza Strip, with a total bed capacity of 46 beds. The MOH hospitals are the only provider for oncology and haematology service with a total bed capacity of 32 beds in three different centres (MOH Report, 2006). Table 1-1 illustrates the

distribution of nurses in MOH hospitals by each hospital according to the statistics of 2007 (Palestinian Nursing Association-Gaza stream, 2007).

Table 1-1: Distribution of nurses in MOH hospitals in Gaza

Hospital	BSc		Diploma*		Others	Total
	M	F	M	F		
Nasser	68	56	49	41	3	**217**
Mubarak	10	30	20	38	4	**102**
Kamal Odwan	25	19	19	8	2	**73**
Tel Assultan	7	30	2	8	2	**49**
Naser paediatric	44	27	18	8	4	**101**
Al-Najjar	31	10	11	1	2	**55**
Psychiatric	9	8	6	2	1	**26**
Al-Dorra	21	15	6	3	2	**47**
European	76	37	48	30	7	**198**
Al-Aqsa	33	28	23	14	2	**100**
Beit–Hanoon	11	13	7	2	1	**34**
Ophthalmic	15	7	5	4	1	**32**
Al-Rantisi	23	14	7	14	2	**60**
Shifa	210	120	124	85	11	**550**
Total	**573**	**424**	**345**	**258**	**44**	**1644****

***Associate degree or hospital-based diploma**

****All of them are full-time nurses**

Non MOH hospitals (NMOHH)

Few non-MOH hospitals (NMOHH) are available in Gaza Strip (GS). They are furnished with about 24% of the hospital beds in the GS (MOH Report, 2006). There are four important non-Ministry of Health hospitals. The first hospital is Al-Awda hospital, which is located in North of Gaza and mainly deals with emergency and surgical patients, in addition to maternity services. The second hospital is Ahli Arab hospital, formerly called the Baptist hospital, which is located in the core of Gaza City. It serves medical, surgical patients, and offers paediatric and maternity services. The third hospital is Al-Quds hospital, which belongs to the Palestinian Red Cross Society and is located in Gaza City. It was seriously affected by the last Israeli war against Gaza as the second floor of the building immediately caught fire and the hospital's pharmacy

was also partly damaged (Al Mezan Centre, 2010: 15). The fourth one is Al-Wafaa hospital, which is also located in Gaza City and specialises in rehabilitation. Table 1-2 illustrates the distribution of nurses in the four non-MOH hospitals (Palestinian Nursing Association-Gaza stream, 2007).

Table 1-2: Distribution of nurses in four NMOH hospitals in Gaza

Hospital	BSc		Diploma*		Others	Total
	M	F	M	F		
Ahli Arab hospital	18	6	9	9	2	**44**
Al- Awda hospital	6	15	9	15	0	**45**
Al-Wafaa hospital	19	11	8	17	0	**55**
Al-Quds hospital	34	17	22	6	0	**79**
Total	**79**	**49**	**48**	**47**	**0**	**223****

***Associate degree or hospital-based diploma**

****Some of them are part-time nurses**

1.4.4 Nursing education in Gaza

In Gaza Strip, there are two basic educational options for those invested in pursuing a career in the nursing as a registered nurse. Each educational track provides the knowledge and skills for a particular entry level of practice (Palestinian Nursing Association, 2007). Students can choose one of two paths to become a registered nurse: a programme that awards an associate degree in nursing, or baccalaureate nursing programme. A person licensed as a registered nurse may work directly at the bedside or supervise others in managing the care of groups of patients.

In Gaza, there are three nursing schools offering associate degrees and one which offers a diploma programme in midwifery over two years duration. Up till 2000, most RNs in the Gaza Strip were initially educated in nursing by hospital-based diploma programmes. This educational programme was stopped completely in 1998 in Gaza. Two baccalaureate programmes are offered in Gaza: one in the Faculty of Nursing at the

Islamic University of Gaza, and the other one in the Palestine College of Nursing. No master's programmes in nursing are offered except in the Gaza branch of Al-Quds University. Doctoral programmes are not available in Gaza at all (Palestinian Nursing Association, 2007). In 2009, a new bachelor programme in midwifery was established in the nursing faculty at the Islamic University of Gaza.

1.5 The research problem

Nurses are particularly susceptible to the development of burnout, mainly because of the nature and the emotional demands of their profession. Nurses in Gaza are working under difficult occupational conditions particularly after the last Israeli war against Gaza and the continuation of the siege that affects the health condition in Gaza. There is an abundance of literature in relation to nursing burnout in many countries, but nothing about Gaza.

1.6 The research purpose, objectives and questions

Purpose

To explore the prevalence and nature of burnout in a population of nurses in Gaza-Palestine, and then to develop a strategy for reducing burnout and test its effectiveness.

Objectives

1. To identify the prevalence and nature of burnout among hospital nurses in Gaza.

2. To explore the relationships between burnout and pertinent variables such as gender, hospital type, age, experience, specialisation, qualifications, marital status, night shifts, extra work, and salary.

3. To design a programme that will lead to reduction in the levels of burnout among nurses in Gaza.

4. To test whether the programme produces an outcome that is effective.

The research questions

1. What is the prevalence of burnout among hospital nurses in Gaza?

2. Are there any relationships between burnout and pertinent variables such as gender, hospital type, age, experience, specialisation, qualifications, marital status, night shifts, extra work and salary?

3. What components should be included in a programme to reduce burnout among hospital nurses in Gaza? and what processes should be followed in the provision of a programme to reduce burnout in among hospital nurses in Gaza?

4. Would a burnout reduction programme produce effective results?

1.7 Summary

This chapter has identified the occupational burnout among nurses and its impact on individuals and institutions. A number of theoretical models of burnout were presented to clarify the occurrence of burnout and the factors that may lead to. Data about Gaza, region of study, were provided including population of Gaza, hospitals and nurses, and the current political situations. Chapter 2 presents the literature review which will provide a more focused consideration of the prevalence of the problem regionally and internationally and the methodologies used including the nature of samples, their number and the tools used in these studies. These data will help to make the best comparison between the results of this study and other studies. To make the picture clearer, relationship between occupational burnout and workload, coping strategies and social support will be presented. Also, chapter 2 will review different burnout measures and previous intervention programmes used to reduce burnout among nurses in different countries.

CHAPTER 2

LITERATURE REVIEW

Because this study is the first one to investigate burnout among nurses in the Gaza Strip and to test a programme to prevent or reduce it in Gaza strip, this chapter reviews and analyses the available literature on nurses' burnout including, the historical background, definition, signs and symptoms, causes and complications. It also highlights burnout and its relationships to stress, coping strategies, social support, burnout measures in Arab countries (including Palestine) and other countries. The specific factors affecting the level of burnout are also discussed. Finally, different programmes used to reduce burnout among nurses are presented.

2.1 Literature review strategy

A literature search was performed using bibliographic databases as well as retrieving full text interlibrary loan articles. Based upon the eligibility criteria, specific search limits were applied in order to restrict results to reflect the focus and research questions of this review. The limits set included only articles written in English, involving nurses, explicitly focused on the relationship between nurses and burnout, included measures of good psychometric properties preferring Maslach Burnout Inventory (MBI), published from 2003 onwards and articles published in peer-reviewed journals.

The search used a systematic approach, rather than conducting a formal systematic review. This approach tends to address broader topics where many different study designs might be applicable, and is less likely to seek to address very specific research questions (Arksey & O'Malley, 2005). Initially literature published from 2003 to 2010

was included. The search was started in 2010, and the final update was in May 2012. The search procedure included three steps. In the first step, the investigator put the search terms in the database search engine. When the results appeared, the investigator read through the articles' titles and the related articles were saved to a folder. In the second step, the investigator read article's abstracts to exclude unrelated articles and then the full texts were extracted. In the third step, the investigator read the full articles and used them in the review while other articles were excluded if not related to burnout among nurses.

For burnout among nurses, after the wide range of search terms had been established they were entered into the following database search engines: CINAHL (Cumulative Index to Nursing and Allied Health Literature), PsycINFO (Psychological Information Database) and MEDLINE (Medical Literature Analysis and Retrieval System Online). This generated 578 articles, which was reduced to 325 after limits were applied to reflect eligibility criteria. Abstracts were initially searched to check for relevant studies and, on the basis of this, 188 were rejected due to their content being unrelated to the focus of this review (i.e. burnout or nurses). A further 27 studies were removed due to duplications in searches. A total of 110 articles were read fully to ascertain suitability for the review, however, 44 were rejected because they did not meet the inclusion criteria outlined above (for example, studies where no valid assessment measure of burnout was used, or not reporting prevalence of burnout). In total, 66 studies were suitable for review but not all of them included in this thesis (this because several studies were conducted in certain countries while few or no studies in other countries). The same procedures were followed for burnout reduction programme among nurses and in total 14 studies were included for review. Appendix (1) shows more details of search strategy. To get studies that were conducted in Arab countries, published in

Arabic and not available electronically, the investigator visited all libraries in Gaza universities and colleges and four Egyptian universities, namely Cairo University, Ain Shams University, October 6 University and Misr University for Science and Technology.

2.2 Quality of research papers

The quality of research papers and 'hierarchy of evidence' used in burnout among nurses were assessed by using Hawker et al's (2002) tool (see appendix 1). This tool can be used for qualitative and quantitative studies (Dixon-Woods & Fitzpatrick, 2001). Nine areas are rated on a 4-point scale as follows: very poor=1, poor=2, fair=3, good=4. The areas included abstract and title, introduction and aims, method and data, sampling, data analysis, ethics and bias, findings/results, transferability, implications and usefulness. The quality assessment was applied to all included studies. For each paper it was possible to calculate a total score (9 very poor-36 good), which indicated its methodological rigour (Hawker et al, 2002). The higher the total score, the better the quality, but no cut-off point in score is stated which distinguishes good quality from low quality articles. The researcher did not exclude papers on the basis of their position in a hierarchy and ensured that any relevant reasonable quality paper was included. Quality issues were considered for each single paper and were indicated in tables of studies of burnout among nurses (see table 2-1 and table 2-2).

2.3 Prevalence of burnout among nurses

2.3.1 Prevalence of burnout among nurses in Arab countries

Two studies have been reviewed in King Fahd University Hospital, Saudi Arabia. The first one (Al-Turki, Al-Turki, Al-Dardas, Al-Gazal, Al-Maghrabi, Al-Enizi & Ghareeb,

2010; Al-Turki 2010) included 198 male and female multinational nurses, while the second study 60 female Saudi nurses. The results of both studies were very similar particularly in the level of emotional exhaustion (45%, 45.9% respectively). The main differences were located in the level of reduced personal accomplishment. Al-Turki et al (2010) indicated that high levels of burnout among nurses in Saudi Arabia lead to negative health conditions of nurses and subsequently decreased the quality and efficacy of patient care.

Very few studies were conducted in Gulf Arab countries. In their study among Iraqi hospital nurses, Al-Doski & Aziz (2010) found that most were dissatisfied with their job description. Moideenkutty, Blau & Al-Mandhari (2008) indicated that work exhaustion and burnout among nurses in Oman may have negative implications for nurses and patient safety in hospitals. Jahrami (2009) found that levels of burnout in Bahraini nurses were low.

Burnout among Jordanian nurses was found to be high, and significantly correlated with job satisfaction and social support (Hamaideh, 2011). The most important determinants of burnout among Jordanian nurses were found to be the kind of work, amount of work, and the career path possible (Armstrong-Stassen, Rowaida, Cameron & Horsburgh, 1994; Al-Ma'aitah, Cameron, Horsburgh & Armstrong-Stassen, 1999).

Three studies were found about Lebanese nurses. The first one was conducted by Sabbah, Sabbah, Sabbah, Akoum & Droubi (2012) and indicated that 77.5% of 200 Lebanese nurses reported high emotional exhaustion, 36.0% reported high depersonalization while 33.0% experienced reduced personal accomplishment as measured by MBI. In the second study conducted by El-Jardali et al (2011), Lebanese nurses described the effect of their current positions on their psychological well-being,

reporting work-related stress, withdrawal, emotional and moral exhaustion and/or burnout. In the third one, Badr et al (2010) indicated that many Lebanese nurses leave the profession as a result of emigration, family commitments and burnout.

Burnout among hospital nurses in Tunisia was high and significantly positively correlated with depression and personal difficulties (Halayem Dhouib, Zaghdoudi, Zremdini, Maalej, Bechir & Labbene, 2010). In Palestine, Abushaikha & Saca-Hazboun (2009) concluded that the level of burnout among Palestinian nurses working in private hospitals in the West Bank was moderate and positively correlated with levels of job satisfaction.

Although burnout among nurses has been studied in a great deal, this work has not included Gaza nurses. In addition to burnout factors frequently cited among nurses internationally, there are more specific factors which might impact upon Palestinian nurses in Gaza. These factors may include: the Intifada (Uprising) of Palestinian people and the increasing number of killed and wounded which tends to ensure that nurses are overloaded with work. Moreover, being required to be on emergency schedule for extended periods and the shortage of nurses and restriction on hiring new nursing staff due to the policy of economic constraint adds to the stress experienced. Not receiving their salaries regularly for many months at a time and no job description for most of nurses also impact upon the mental health of the nurses.

Table 2-1 shows the most recent available studies regarding prevalence of burnout among nurses in Arab countries including Palestine.

Table 2-1: Prevalence of burnout among nurses in Arab countries

Author (s)/Year	Locale	Tool	Population	Findings	Quality scores (Quality issues)
Abushaikha & Saca-Hazboun (2009)	West Bank-Palestine	MBI	152 nurses in private hospitals	Moderate levels of burnout and mostly low levels of personal accomplishment (39.5%), moderate levels of emotional exhaustion (38.8%) and low levels of depersonalisation (72.4%)	23 (The study used a cross-sectional design which assesses only relationships between variables at one point of time but not causal relationships. Data for this study were obtained by self-report, which may reflect bias in reporting. The sample was only selected from private hospitals, so it is difficult to generalise the findings to the public hospitals).
Moideenkutty et al (2008)	Oman	MBI-EE	229 hospital nurses	Leader-member exchange was found to be a significant negative correlate of work exhaustion directly, as well as beyond the controlled- for correlates of gender, organisation experience, occupation experience, education level, job satisfaction, occupation satisfaction and work interfering with family	23 (Work exhaustion was only partially measured. The research design is the focus on one demand, work interfering with family. All data was collected at one point in time so that causal inference is limited. There is a common method variance problem since all data is self-report).
Al-Turki (2010)	Saudi Arabia	MBI	60 female Saudi nurses	45.9% had high EE, 48.6% had high DP	22 (The presented results are the first in the country, so the findings should be vied cautiously. The complex nature of MBI in the English language ha not been clearly understooc by the Saudi nurses The sample size is small anc the sample from one hospital cannot be generalised for the whole country).

Al-Turki et al (2010)	Saudi Arabia	MBI	198 multinational nurses	45% had high EE, 42% had high DP, and 71.5% had moderate to low PA	22 (The nursing workforce in the sample had at least five different nationalities and the tolerance of burn syndrome and exhibiting symptoms may be different. A semi-structured personal interview might have produced different results from the MBI questionnaire used in the study. Some of the nurses who were surveyed may have just returned from their annual vacation, which could change the scoring of the domains as recovery might have set in).
Halayem-Dhouib et al (2010)	Tunisia	MBI	Nursing staff (n=54), residents (n=41) and practitioners (n=11) in Razi hospital in Tunisia	High levels of burnout. Mean scores for MBI subscales for EE, DP, and low PA were 26.18, 10.20, and 32.94 respectively	24 (The design was limited to participants working in Razi hospital; so, the results cannot be generalised to other hospitals. The sample sizes were not equally distributed. As a cross-sectional design was used, a causal relationships between variables cannot be established.
Hamaideh (2011)	Jordan	MBI	181 mental health nurses.	High levels of emotional exhaustion, moderate levels of depersonalisation and personal accomplishment	24 (Employing cross-sectional design allows relationships between variables to be identified at one point of time only and does not allow causal relationships among variables to be established. Data for this study were obtained by self-report, which may reflect bias in reporting. Participants may have underestimated or overestimated their level of burnout, social support, and job satisfaction).

Jahrami (2009)	Bahrain	MBI	120 nurses	Means of EE=18.14, DP=6.40 and reduced PA=33.49	22 (The design was limited to participants working in a single hospital; therefore, the results cannot yet be regarded as generalisable t any population of clinicians beyond those in the study. The sample sizes of medical doctors, nurses and other health care professionals were not equally distributed. The use of an English language questionnaire (MBI) in a non-English speaking country may raise the issue of languag in collecting the data. The sample size of the occupational therapy staff was small (n = 13, four occupational therapists and nine occupational therapy technicians).
Sabbah et al (2012)	Lebanon	MBI	200 nurses	77.5% reported high emotional exhaustion, 36.0% reported high depersonalization while 33.0% experienced reduced personal accomplishment	25 (The sample size is insufficient to allow for a more detailed analysis of differences in workplace and burnout across different hospitals' departments. This study is a cross-sectional study, so a causal relationship between burnout and predictors cannot be established. The absence of another valid reference instrument in Arabic is a major obstacle for the establishment of concurrent validity and predictive validity).

2.3.2 Prevalence of burnout among nurses in other countries

The other (Non-Arab) countries will be divided into six regions: Asia, Africa, North America, South America, and Australia and New Zealand:

In Asia: More than 45% of psychiatric nurses in Iran had a high level of job burnout and there was a significant correlation between job burnout and inability to competently perform their occupational requirements (Ashtari, Farhady & Khodaee, 2009).

The high level of burnout among Turkish nurses working in emergency nurses was 45.3% (Kalemoglu & Keskin, 2002), and 14.5% in general nurses (Onder & Basim, 2008). In the study by (Akkus, Karacan, Goker & Aksu, 2010) among nurses working in stem cell transplantation units, the mean subscale scores for emotional exhaustion were the highest, followed by personal accomplishment and then depersonalisation. Findings suggest that nurses who reported higher levels of emotional exhaustion also reported higher levels of depersonalisation. Also, nurses with higher emotional exhaustion or depersonalisation did not always report lower personal accomplishment.

Xie et al (2011) indicated that 527 Shanghai nurses expressed a high level of emotional exhaustion, moderate level of depersonalisation, and low level of reduced personal accomplishment. Dong-mian et al (2010) found that 65% of 149 nurses in China met the criteria for job burnout. Lin, Stjohen & Mcveigh (2009) found that burnout among 128 nurses from various wards of a large teaching hospital in Beijing, China was moderate (EE=22.75, DP=4.17, PA=33.90). Results of Lee & Akhtar's (2007) study showed that all the perceived sources of stress among nurses working in public hospitals in Hong Kong had significant effects on one or more dimensions of job burnout, with job demands and lack of professional recognition having the most significant effects on all the burnout dimensions.

A study by Lee, Song, Cho, Lee & Daly (2003) showed that Korean nurses reported higher levels of burnout (50%) than nurses in western countries such as Germany, Canada, the United Kingdom and the United States of America.

Yunus et al (2009) found that 40% of registered Malaysian nurses in public hospital had burnout levels that exceed the norms for health care workers. Lu (2008) showed organisational role stressors were the most significant factors in burnout among nurses in the Philippine's largest hospital.

Prevalence of burnout was 59.2% among Japanese psychiatric nurses (Imai, Nakao, Tsuchiya, Kuroda & Katoh, 2004). Sixty percent of Japanese nurses were found to be dissatisfied with their jobs, and 35% expected to leave their job within 18 months (KanaiPak, 2007) as a correlation between nurse turnover and nurse burnout especially with regard to nurses' exhaustion was detected (Shimizu, Feng & Nagata, 2005).

In Africa: The high level of burnout among nurses working in obstetrics and gynaecology hospital in Malawi was 72% (Thorsen et al, 2011), and 31% in mid-level care providers (McAuliffe, Bowie, Manafa, Maseko, MacLachlan, Hevey, Normand & Chirwa, 2009). Thorsen et al (2011) found a correlation between burnout and the health and wellbeing of the midwives in Malawi.

While 62% of the health workers in Zambia were experiencing moderate-to-high levels of emotional exhaustion, none of them were experiencing any feelings of depersonalisation and most of them reported a sense of personal accomplishment Dieleman, Biemba, Mphuka, Sichinga-Sichali, Sissolak, Van der Kwaak & Van der Wilt (2007). Emotional exhaustion (EE) was 38% of Kenyan psychiatric nurses (Ndetei, Pizzo, Maru, Ongechat, Khasakhala, Mutiso & Kokonya, 2008), and 39.1% in Nigerian general hospital nurses (Lasebikan & Oyetunde, 2012). Ndetei et al (2008) found that

59% of the staff working in Kenyan hospitals had either taken sick leave or taken some time off work within the past year which is considered an indicator of some level of burnout.

In Europe: The high level of emotional exhaustion (EE) among nurses in Greece was 38.3% in orthopaedic nurses (Kiekkas et al, 2010), and 45.3% in general hospital nurses (Malliarou et al, 2008). Burnout levels of Greek nurses were associated with non-satisfactory relations with physicians, high difficulty in meeting patient care needs, low work satisfaction and environmental factors (Kiekkas, Spyratos, Lampa, Aretha & Sakellaropoulos, 2010; Malliarou, Moustaka & Konstantinidis, 2008).

In Italy, 37.1% of specialist oncology nurses in Italy had high EE (Ostacoli, Cavallo, Zuffranieri, Negro, Sguazzotti, Picci, Tempia, La Ciura & Furlan, 2010), and 35% oncology nurses (Quattrin, Zanini, Nascig, Annunziata, Calligaris & Brusaferro, 2006). High burnout levels among Italian nurses were correlated with stress and lack of organisation (Quattrin et al, 2006), distrust in the leader and the organisation (Bobbio et al, 2012).

High level of emotional exhaustion among community mental health nurses in Wales, UK was 36% (Edwards, Burnard, Hannigan, Cooper, Adams, Juggessur, Fothergil & Coyle, 2006). The level of burnout among UK nurses was significantly related to taking sick leave and to leaving their jobs (Sherring & Knight, 2009), and a sense of personal accomplishment at work was significantly associated with a tendency to endorse positive statements about aggression (Whittington & Higgins, 2002). Having insufficient nursing staff relative to the nursing workload to be delivered leads to increased pressure, stress, higher levels of burnout, lower job satisfaction (Sheward, Hunt, Hagen, Macleod & Ball, 2005). Rafferty, Clarke, Coles, Ball, James, McKee &

Aiken (2007) reported that nurses working in hospitals experiencing high mortality rates showed higher burnout rates and were approximately twice as likely to be dissatisfied in their job, and more likely to report a low/deteriorating quality of care on their ward/in their hospital.

Ksiazek, Stefaniak, Stadnyk & Ksiazek (2011) found that intensity of burnout among nurses working in Poland was significantly higher among oncology nurses (26.43%) than among surgical ones (24.46%). Nurses in Poland had high levels of stress and burnout at work related to work overload, negative emotions, lack of rewards and physical burdens (Oginska-Bulik, 2006) and bad working conditions, despite a relatively low rate of intention to leave due to economic constraints (Estryn-Behar, Van der Heijden, Oginska, Camerino, Le Nezet, Conway, Fry & Hasselhorn, 2007).

About half (48.6%) of Finish nurses had scores which indicated they were frustrated or burnt out (Koivula, Paunonen & Laippala, 2000). High burnout was greater among Spanish nurses exposed to high psychological demands, low job control, and low supervisors' social support (Escriba-Aguir, Martin-Baena & Perez-HoyosInt, 2006) and was found to be correlated with suicidal risk, anxiety, depression and low self-esteem (Tomas-Sabado et al, 2010). In comparison study, (Gombor, 2009) concluded that the Hungarian nurses had significantly higher levels of burnout and experienced more work-related stress than the Swedish nurses. Conflicts rising between the Lithuanian nurse and job environment were associated with high level of burnout (Vimantaite & Seskevicius, 2006). Raiziene & Endriulaitiene (2007), while higher levels of empathy and occupational commitment of nurses were associated with lower emotional exhaustion.

In North America: The high level of burnout among travel nurses in the USA was 19.8% (Faller et al, 2011), 40% of nurses in urban hospitals (Vahey et al, 2004), 73% in nurses with trauma (Mealer, Burnham, Goode, Rothbaum & Moss, 2009), and 38.4% in direct care hospital nurses (Erickson & Grove, 2007). Hooper, Craig, Janvrin, Wetsel & Reimels (2010) indicated that 82% of emergency nurses in the USA had moderate to high levels of burnout. Also, it has been found that perceived workload would significantly predict burnout in American nurses caring for patients with some chronic diseases (Gueritault-Chalvin Kalichman, Demi & Peterson, 2000), and more than 20% of nurses intended to leave their jobs within one year (Vahey et al, 2004).

In Canada, high levels of burnout were observed in 22.5% in general hospital nurses (Poghosyan et al, 2010), 47.3% in staff nurses (Spence, Leiter, Day & Gilin, 2009), 66% in new graduate nurses (Cho, Laschinger & Wong, 2006), 58% in nursing managers (Laschinger, Almost, Purdy & Kim, 2004). Vigour and perceived organisational support were predictors of burnout (Marjanovic, Greenglass & Coffey, 2007), and Emotional Exhaustion was a significant predictor of ratings of poor care quality (Poghosyan et al, 2010).

In South America: In Brazil, prevalence of burnout was 17.2% in nursing residents (Franco, Leite de Barros, Nogueira-Martins & Zeitoun, 2011), 35.7% in general nurses (Moreira, Magnago, Sakae & Magajewski, 2009), 8.2% in emergency nurses (Jodas & Haddad, 2009), 24.1% in community health nurses (Da Silva & Menezes, 2008), and 28.6% in oncology nurses (Kitze & Rodrigues, 2008).

It has been indicated that the prevalence of high burnout syndrome among Mexican hospital nurses (the Gynaecology, Paediatrics and Family Medicine Hospital) was 6.79% (Palmer-Morales, Prince-Velez, Searcy-Bernal & Compean-Saucedo, 2007),

8.5% in general hospital nurses (Tapia-Hernandez, Avalos-Garcia, Cesar-Vargas, Franco-Alcantar, Gomez-Alonso & Rodriguez-Orozco, 2009), and 40% in neonatal nurses (Silvia, Gutierrez, Rojas, Tovar, Guadalupe, Tirado, Araceli, Cotonieto & Garcia, 2005). The level of burnout among Mexican nurses was correlated with the level of commitment (Tapia-Hernandez et al, 2009), and with losing interesting in work and general exhaustion (Silvia et al, 2005). In Colombia, the highest burnout subscale among nurses was depersonalization, followed by emotional exhaustion (Tuesca-Molina, Urdaneta, Lafaurie, Torres & Serpa, 2006).

In Australia and New Zealand: Low level of emotional exhaustion was found in rural psychiatric nurses in Victoria, Australia (Pinikahana & Happell, 2004), and high levels in Australian oncology nurses with direct patient contact (Girgis et al, 2009). The main predictors of burnout among Australian nurses were increased hours of patient contact (Girgis, Hansen & Goldstein, 2009), employment insecurity, issues with management, problems with the nature of the work, inadequate resources and services (Taylor & Barling, 2004), and job dissatisfaction (Happell, Martin & Pinikahana, 2003).

Emotional exhaustion was high among 22.2% of nurses in New Zealand (Poghosyan et al, 2010), and was correlated with reductions in job satisfaction and Job stress (Daniels, 2004; Kalliath & Morris, 2002) and low supervisory support (Kalliath & Beck, 2001).

From the previous literature, one can conclude that the prevalence of burnout among nurses is different between countries and even in the same country. Burnout has been considered as a great problem that leads to several negative outcomes. Most of studies recommended intervention programmes to reduce burnout in nurses.

Table 2-2 shows the most recent studies regarding prevalence of burnout among nurses in other countries including the locale, tool used, population, quality scores and quality issues of each study.

Table 2-2: Prevalence of burnout among nurses in other countries

Author (s)/Year	Locale	Tool	Population	Findings	Quality scores (Quality issues)
ASIA					
Akkus et al (2010)	Turkey	MBI	57 nurses in stem cell transplantation units	Mean scores for EE were the highest, followed by PA & DP	24 (Data were not gathered on how many patients the units treated, which types of transplants were carried out, the number of nurses and doctors. Also, this study was limited to only one city in Turkey, so this study sample is small).
Ashtari et al (2009)	Iran	MBI	100 hospital staff (including nurses)	45.6% had job burnout at a high level. High level EE: 42.5%, high level DP: 65.5% & low PA: 21.0%	25 (Data from psychiatrists (as well as health centre clerks) were absent. Demographic data were not obtained and did not include other mental health centres and facilities).
Imai et al (2004)	Japan	Pines' Scale	525 psychiatric nurses	Prevalence of burnout was 59.2%	26 (The reliability and validity of the Japanese version of Pines Burnout Scale, employed in this study, have yet to be strictly verified).
Lee et al (2003)	Korea	MBI	178 nurses	50% high levels EE and 76% low PA	26 (The response rate is relatively low (36.2%).The distribution of the different rank of staff, years of experience and service setting is uneven, which might affect the results of the statistica analyses).
Lin et al (2009)	China	MBI	128 hospital nurses	EE=22%.75, DP=4.17%, PA=33.90%	27 (The sample was drawn from one hospital so, generalisation of results is limited. The response rate was not high (51%). Cross-sectional method was used with its disadvantages).
Onder & Basim (2008)	Turkey	MBI	248 nurses	14.5% high, 34.7% moderate & 50.8% low burnout	22 (Even longitudinal study was used; it is not known how long it takes for one facet of burnout to have consequences for the other. Burnout seems to be stable over time, either making it hard to capture causal links between dimensions of burnout or rendering effect sizes small. Limited number of observations. Findings may pertain to study sample only).

Xie et al (2011)	China	MBI	527 nurses	High level EE, moderate level DP & low level reduced PA	23 (The generalisation involved in findings should be taken with caution. Only 20–30% nurses from each hospital were invited to participate in the investigation. The study participants were not selected in random and their characteristics may be different from those who did not participate).
Yunus et al (2009)	Malaysia	MBI	291 registered nurses	40% had burnout levels exceed norms for health care workers	20 (No information about reliability and validity of MBI and no details about translation of the tool. The cross-sectional design was used so causal effects are not available).
AFRICA					
Dieleman et al (2007)	Zambia	MBI	34 health workers	62%: moderate-to-high levels of EE	21 (The MBI was not tested and validated locally. Both quantitative methods did not provide sufficient reliable information and only the responses could be used).
Lasebikan & Oyetunde (2012)	Nigeria	MBI	270 nurses	High level of burnout (EE=39.1%, DP=29.2%, reduced PA=40.0%)	23 (The aim was to focus on the nurses rather than on the patients themselves. Various coping strategies employed by these nurses were not studied. Correlation between the General Health Questionnaire (GHQ) with burnout was not studied).
McAuliffe et al (2009)	Malawi	MBI	153 mid-level care providers	31% high EE and 27% low PA	24 (Response rate was relatively low (41%). No details about reliability, validity and translation of MBI in Malawi).
Ndetei et al (2008)	Kenya	MBI	285 psychiatric staff	38% reported high EE, 47.8% high DP and 38.6% low PA	26 (Out of the 530 members of staff on the hospital payroll, only 398 (75.1%) were available at the time of the study and the response rate was lower than desired).
Thorsen et al (2011)	Malawi	MBI	101 midwives	72% reported EE, 43% reported DP & 74% reduced PA	26 (The sample size was small. Assessment of overtime hours and its association to burnout was not performed. Low Cronbach's alpha suggests that MBI may not be culturally appropriate. Data were cross-sectional and collected from self-reports which do not allow for causal conclusions).

EUROPE					
Edwards et al (2006)	Wales	MBI	206 mental health nurses	36% high level EE, 12% high level DP & 10% low level PA	28 (The response rate was low (32%). Caution must be taken when interpreting the findings by using correlation analysis as i cannot be interpreted as establishing cause-and-effect relationships).
Kiekkas et al (2010)	Greece	MBI	60 orthopaedic nurses	38.3% had high EE, 35.0% high DP, and 53.3% low PA	25 (Small convenience sample may raise the possibility of type II error and not allowing for multivariate analyses. Some factor previously identified to predispose to burnout were not investigated in this study. Cut-off points used for determining high burnout may vary from study to study because of social and cultural differences; therefore, the findings should be considered with caution).
Ksiazek et al (2011)	Poland	MBI	60 oncology and surgical nurses	26% oncology, 24% surgical nurses	22 (The study was designed as a cross-sectional questionnaire survey. It is very difficult to generalise the findings as the sample was small and has been chosen from one hospital. Nothing mentioned about translation of MBI and its reliability and validity in Poland).
Malliarou et al (2008)	Greece	MBI	64 hospital nurses	45.3%: high level EE, 40.6%: high DP	23 (The sample was drawn from one hospital. The response rat was not high (42.6%). The study was designed as a cross sectional).
Ostacoli et al (2010)	Italy	MBI	59 specialist oncology nurses	37.1%: high EE, 27.8%: high DP and 48.1%: low PA	25 (The sample size was not large. The role of other factors (as marital status, children) that have been recognized as possible contributors to burnout was not investigated).
NORTH AMERICA					
Erickson & Grove (2007)	USA	MBI	843 direct care hospital nurses	Burnout level: 38.4%	26 (This was a self-administered survey, which raises the potential biases and limitations).
Faller et al (2011)	USA	CBI	1231 nurses	Personal burnout: 22.2% and work-related burnout: 19.8%	24 (The response rate was low (28.9%). This is a cross-sectional study does not allow measuring causal effects).

Hooper et al (2010)	USA	ProQOL R-IV	109 hospital nurses	82% had moderate to high levels of burnout	24 (Small sample size, which permitted identification of trends only. Confidence that this finding can be generalized is limited by the small number of male respondents (n = 9). The study measured burnout and compassion fatigue at a single point in time, and there is a high probability that perceptions change over time due to changes in individual and workplace circumstances. The findings are limited to this one acute care hospital and cannot be generalised to other organisations).
Mealer et al (2009)	USA	MBI	332 hospital nurses	86% met criteria for burnout	28 (This survey was administered to a homogeneous sample of nurses within a single hospital setting in an urban area, and thus may not be generalizable to other facilities. Nurses were not asked if they had ever been exposed to a traumatic event outside of the work environment. It is not possible to establish causal risk factors with this data. The response rate was 41%, and accordingly, results should be interpreted with caution).
Spence et al (2009)	Canada	MBI	12 hospital nurses	47.3% scored high levels of EE	24 (The study relied on nurses' reports of burnout, with all of its potential biases and limitations. The cross-sectional design does not allow claiming causal effects).
Vahey et al (2004)	USA	MBI	820 hospital nurses	40% high job-related burnout	30 (The study conducted cross-sectional surveys of nurses and patients. This was a self-administered survey, which raises the potential biases and limitations).

SOUTH AMERICA					
Da Silva & Menezes (2008)	Brazil	MBI	141 doctors and nurses	24.1% presented burnout. Moderate or high levels of EE, DP & reduced PA were observed in 70.9%, 34.0% & 47.5% of the participants, respectively	24 (It is possible that some doctors and nurses who presented burnout syndrome and did not participate in the study because they were on leave or had changed their profession, which may have led to an underestimation. The results generalization and the statistical power are limited due to the small number of investigated subjects. The sample was constituted predominantly by women (92.2%); therefore, it is not possible to make many inferences regarding the male sex. The cross-sectional design does not allow establishing a temporal relationship between burnout syndrome and common mental health disorders).
Franco et al (2011)	Brazil	MBI	16 nursing residents	17.2% showed high rates in EE & DP, 18.8% showed impaired PA	19 (This study was carried out in a single facility, and the reduced sample given sample loss; ten (38.5%) residents withdraw the programme. It was not possible to establish a reliable comparison of results with those of other studies because in most of them different criteria and cut-off points were used).
Jodas & Haddad (2009)	Brazil	MBI	67 emergency nurses	8.2% had high level of burnout, 54.1% had medium level and only 37.7% of participants had a low level for burnout	20 (The sample is low and generalizability should be considered with caution. This was a self-administered survey, which raises the potential biases and limitations).
Kitze & Rodrigues (2008)	Brazil	MBI	21 oncology nurses	28.6% presented high scores in EE; 28.6% had high scores in DP & 19.1% in lack of PA	19 (Generalisation of findings should be considered with cautions as the sample was drawn from two rural hospitals. The sample is low to be considered for generalizability. Reliability and validity of study instruments are not very clear).
Silvia et al (2005)	Mexico	Cyberia Shink	236 hospital nursery nurses	40% emotionally exhausted, 32% undergo DP	24 (This is a cross-sectional study which does not help in concluding effective or causative relationship. Very little was mentioned about reliability and validity of study instruments)

AUSTRALIA AND NEW ZEALAND					
Girgis et al (2009)	Australia	MBI	393 oncology nurses	High levels of EE in 32.8% with direct patient contact and 26.7% of those with no direct patient contact	26 (Caution should be exercised in generalising these findings to the total Australian oncology workforce. The study did not involve the collection of objective measures of burnout).
Pinikahana & Happell (2004)	Australia	MBI	136 psychiatric nurses	The majority of nurses reported low level of EE & DP score. On PA,, only 11% recorded a high score and 87% recorded low score	23 (Generalisation of findings should be considered with cautions as the sample was drawn from two rural hospitals. Th cross-sectional design does determine if burnout and satisfactio have causative relationship).
Poghosyan et al (2010)	New Zealand	MBI	4,799 hospital nurses	22.2% had high EE, 6.0% had DP, and 38.2% had low PA	26 (There were variations in the data collection processes acros countries. The variables examined were limited to those collected in the original studies. The study relied on nurses' reports of quality of care, with all of its potential biases and limitations. The cross-sectional design does not allow concluding whether burnout directly affects patient care or not. It is difficult to generalize findings because the data analysed were collected over several years).

2.4 Contributing factors to burnout

Leiter & Maslach (2009) identified six occupational issues that may cause stress and burnout in the workplace: workload, control, rewards, community, fairness, and values.

2.4.1 Workload

This includes the amount of work expected of workers, the environment in which they do it, and the time they have to accomplish it. Maslach et al (2001) considered workload as the most direct factor to the exhaustion aspect of burnout and one of the six areas of mismatch that contribute to mismatch. A mismatch generally comes from excessive overload. A workload mismatch may result from the wrong kind of work or lack the skills for a certain type of work. Workload was identified as a major source of stress and burnout in different nursing studies (Aiken, 2003; El-Jardali et al, 2011). Aiken, Clarke, Sloane, Sochalski & Silber (2002) conducted surveys to a random sample of American nurses and the results showed that each patient added to a nurse's base workload of four patients increases the odds of burnout by 23%.

Significant associations between workload and emotional exhaustion were found (Cohen, Village, Ostry, Ratner, Cvitkovich & Yassi, 2004) and has been shown to be a predictor for job burnout (Embriaco, Papazian, Kentish-Barnes, Pochard & Azoulay, 2007). Demerouti, Bakker, Nachreiner & Schaufeli (2000) linked high job demands to emotional exhaustion among 109 German nurses and a lack of resources to disengagement. Flynn, Thomas-Hawkins & Clarke (2009) reported that nurses with the highest workloads were five times more likely to burnout compared to nurses reporting lower workloads.

By far the most common source of stress and burnout among nurses is work overload brought on by inadequate staffing (Lapane & Hughes, 2007). In several studies, inadequate staffing has correlated with a high score on the emotional exhaustion

subscale (Vahey et al, 2004; Laschinger & Leiter, 2006). A study of 820 nurses from 20 urban hospitals demonstrated that a poor work environment overload and insufficient staffing were associated with a two to three times greater likelihood of high scores on the emotional exhaustion and depersonalization subscales of the MBI (Brenninkmeijer, VanYperen & Buunk, 2001).

Increased workload is related to other elements besides actual patient volume, including extended shifts, overtime (often mandatory), many consecutive days of work, rotating shifts, weekend work, and on-call requirements (Rogers, Hwang, Scott, Aiken & Dinges, 2004; Trinkoff, Geiger-Brown, Brady, Lipscomb & Muntaner, 2006).

A heavy workload experienced by a nurse affects the nurse, other nurses, the quality of nurse-physician collaboration (Baggs, Schmitt, Mushlin, Mitchell, Eldredge, Oakes & Hutson, 1999), nurse-patient communication (Davis, Kristjanson & Blight, 2003) and training or supervision of new nurses, negative impact on patient outcomes and more hospital deaths (Needleman, Buerhaus, Mattke, Stewart & Zelevinsky, 2002). Hiring more nurses would be the best way to reduce the workload for nurses (Chang, Hancock, Johnson, Daly & Jackson, 2005), but also the most difficult strategy given the economic resources (Riahi, 2011). Blay, Cairns, Chisholm & O'Baugh (2002) point out that 60% of nurse's time is spent upon indirect nursing activities of which general administrative tasks that should and could be performed by less skilled staff. Similarly, computerisation of patient notes could potentially decrease duplication and hence reduce time writing up charts while solving the nurses' problems of missing files (Bergman, 2003).

Nurses in Gaza are expected to perform nonprofessional tasks such as distributing food trays, housekeeping duties, transporting patients, coordinating, performing auxiliary services and answering the same questions of several members of the same family concerning the same patient's condition (Palestinian Nursing Association, 2007).

2.4.2 Control

This includes power relationships with others, lines of authority, and areas of responsibility. It is complicated by cultural norms and communication styles. A sense of control, or autonomy, is important to nurses, and job satisfaction is greater when nurses feel as if they have some control over how they perform their job (Hoffman & Scott, 2003; Wilson, Squires, Widger, Cranley & Tourangeau, 2008). A mismatch in control is generally related to the inefficacy or reduced personal accomplishment aspects of burnout. Mismatches in control most often indicate that individuals have insufficient control over the resources needed to do their work or have insufficient authority to pursue the work in what they believe is the most effective manner. However, this sense of control appears to be lacking for many nurses. In a study by Erickson & Grove (2007), 40% of nurses said that they felt powerless to effect change necessary for safe and high quality patient care. Lapane & Hughes (2007) found that one of the most stressful factors noted by nurses was non-health professionals determining how nurses′ work should be done.

The risk of burnout is increased among nurses who perceive a lack of control in their work environment (Browning, Ryan, Thomas, Greenberg & Rolniak, 2007; Lapane & Hughes, 2007). In a study by Browning et al (2007), the least amount of control was

reported by emergency department nurses, who also had the highest level of burnout; while nurse practitioners reported having the most control and the lowest level of burnout.

2.4.3 Rewards

This includes what individuals receive recognition of contributions, security, belonging adequate salary, and opportunities for advancement. Mismatch involves a lack of appropriate rewards for the work nurses do. Lack of reward is closely associated with feelings of inefficacy. In a study among 204 nurses working at a university hospital, Bakker, Killmer, Siegrist & Schaufeli (2000) found that ERI (Effort-Reward Imbalance) was associated with emotional exhaustion, depersonalization, and reduced personal accomplishment, especially among nurses with high levels of intrinsic effort.

Being fairly rewarded and recognized for contributions is important to nurses, and those who perceive respect and recognition are more likely to be to have a lower level of burnout (Hoffman & Scott, 2003; Graber, Huang, Drum, Chin, Walters, Heuer, Tang, Schaefer & Quinn, 2008; Laschinger, 2004). In the study by Aiken, Clarke, Sloane & Sochalski (2001), only 39% of nurses said that their contributions were publicly acknowledged. Zangaro & Soeken (2007) indicated that 48% of nurses were dissatisfied with the level of recognition they receive, while a range of 18% to 60% of nurses were dissatisfied with salary. Career promotion has been associated with a decreased level of burnout among nurses, yet more than two-thirds of nurses have reported that opportunities for advancement are not available to them in their job (Aiken et al, 2001; Graber et al, 2008). The lack of advancement opportunities has been implicated in high

rates of burnout, and 17% of nurses leaving the profession in 2004 gave this reason (Stone, Du & Gershon, 2007).

2.4.4 Community

This includes the group of people who must work together to fulfill the mission of the organisation (Leiter & Maslach, 2009). Mismatch occurs when nurses lose a sense of positive connection with others in the workplace. Nurses thrive within a community and function best when they share praise, comfort, happiness, and humor with people they like and respect (Maslach et al, 2001). Otherwise, they'll suffer from negative feelings of frustration and hostility. Relationships as a sources of stress, refers to poor interpersonal relationships with colleagues or superiors, which could also include interpersonal abuse. Within the nursing industry this could be particularly relevant with regards to the often demanding relationship between nurses and doctors, which has often been cited as a source of stress (Levert, Lucas & Ortlepp, 2000).

Aiken, Clarke, Sloane, Lake & Cheney (2008) found nurses in hospitals with care environments ranked "poor" experienced higher levels of burnout and job dissatisfaction and were more likely to leave their current positions within the next year. In a study by Sadovich (2005), the results showed that emotional exhaustion and depersonalization among nurses decrease as work excitement increases and personal accomplishment increases as work excitement increases. A study by Vahey et al (2004) showed that nurses were more likely to experience emotional exhaustion, depersonalization, and intent to leave in work environments with inadequate staffing, poor administrative support, and poor nurse-physician relationships. Garrett &

McDaniel (2001) found that perceived environmental uncertainty among 77 nurses increases the likelihood of burnout and supervisor support reduces the likelihood of emotional exhaustion and depersonalization. Kanste, Kyngas & Nikkila (2007) indicated that rewarding transformational leadership helps prevent depersonalization among a sample of 601 Finnish nurses. Coffey & Coleman (2001) found that nurses who found their managers to be unsupportive, reported higher levels of work stress as well as higher levels of Emotional Exhaustion, and nurses who reported an inability to discuss their problems with their colleagues were more likely to report higher levels of Emotional Exhaustion.

2.4.5 Fairness

This includes equal treatment of every member of the workforce in such things as assignment of rewards, tasks, scheduling, recognition, promotions, and decision making (Leiter & Maslach, 2009). A serious mismatch between the person and the job occurs when there is not a perceived fairness in the workplace. Fairness communicates respect and confirms people's self-worth. Unfairness can occur when there is inequity of workload or pay, when there is cheating, or when evaluations and promotions are handled inappropriately. Maslach et al (2001) indicated that a lack of fairness worsens burnout in two ways. First, the experience of unfair treatment is emotionally upsetting and exhausting. Second, unfairness leads to a deep sense of depersonalisation about the workplace.

2.4.6 Values

This includes core ethical principles of an organization: its integrity, priorities, mission, and the quality of its products and services (Leiter & Maslach, 2009). Mismatch occurs when there is a conflict between nurse's aspirations for his/her career and the values of the institution (Maslach et al, 2001). In some cases, people might feel constrained by the job to do things that are unethical and not in accord with their own values. For instance, nurses might have to tell a lie to obtain the necessary authorization. Flynn & Aiken (2002) investigated whether US nurses value attributes in the institution that support a professional nursing practice. The most important value for nurses' job satisfaction were autonomy, control over work environment, and their relationships with physicians.

2.5 The most common burnout measures

With the increased acceptance of a common definition of what burnout is based on, a number of instruments were developed by 38 different authors, in the form of self-report survey/questionnaire instruments, to assess burnout (Maslach et al, 2001). Self-report instruments have been developed in order to capture an individual's perception of his/her response to work-related burnout. Four of those instruments, the Copenhagen Burnout Inventory (CBI), the Pines' Burnout Measure (BM), The Shirom-Melamed Burnout Questionnaire (SMBQ) and the Maslach Burnout Inventory (MBI), will be briefly described.

2.5.1 The Copenhagen Burnout Inventory (CBI)

The Copenhagen Burnout Inventory (CBI) was designed to overcome the limitations of MBI (Milfont, Denny, Ameratunga, Robinson & Merry, 2008) and was developed as part of the PUMA (the Project on Burnout, Motivation, and Job Satisfaction) study

investigating burnout among human service workers in Copenhagen (Kristensen, Borritz, Villadsen & Christensen, 2005). It is a 19-item questionnaire measuring three burnout sub-dimensions. The first subscale is personal burnout which has six items and measures the degree of physical and psychological fatigue and exhaustion experienced by a person regardless of their participation in the workforce. The second subscale is work-related burnout which has seven items and measures the degree of physical and psychological fatigue related to work. The third subscale is client-related burnout has six items and measures the degree of physical and psychological fatigue experienced by people who work with clients. The CBI has been translated into more than eight languages (Kristensen et al, 2005) such as Japanese (Odagiri, Shimomitsu, Ohya & Kristensen, 2004) and English (Biggs & Brough 2006). Several nursing studies have used CBI in different countries such as (Faller et al, 2011; Shimizutani, Odagiri, Ohya, Shimomitsu, Kristensen, Maruta & Iimori, 2008; Flinkman, Laine, Leino-Kilpi, Hasselhorn & Salantera, 2008).

2.5.2 Pines' Burnout Measure (BM)

The next most widely used instrument-next to MBI- is Burnout Measure (BM) by Pines and Aronson, which has been used in about 5% of burnout studies (De Silva, HeZage & Fonseka, 2009). The BM assesses the degree of burnout with one single score by summing up the 21 items of the BM (after recoding positively phrased items). BM comprises three types of exhaustion: physical exhaustion (items 1, 4, 7, 10, 13, 16, 20); emotional exhaustion (items 2, 5, 8, 12, 14, 17, 21); and mental exhaustion (items 3, 6, 9, 11, 15, 18, 19). Individuals are asked to rate the frequency of their experiences about work or life, how they feel today or in general. Responses are made on a 7 level Likert

scale ranging from 1 (never) to (seven) 7 (always). The internal consistency of the whole scale is rather high, ranging from 0.91 to 0.93. Schaufeli & Van Dierendonck (1993) found a pattern of three highly correlated factors that were described as exhaustion (items 1, 4, 5, 7, 8, 10), a combination of physical and emotional exhaustion, demoralisation (items 9, 11, 12, 13, 14, 16, 17, 18, 21) and loss of motive (items 2, 3, 6, 19, 20).

2.5.3 The Shirom-Melamed Burnout Questionnaire (SMBQ)

The Shirom-Melamed Burnout Questionnaire (SMBQ) was constructed as an alternative burnout instrument that assesses exhaustion-or the dwindling of energetic resources-regardless of its occupational context (Shirom & Melamed, 2006). It comprises three subscales-physical fatigue, emotional exhaustion, and cognitive weariness-that load on a second-order "burnout" factor (Shirom, Nirel & Vinokur, 2006). The SMBQ contains 22 items, each rated on a 7-point scale (1being almost never and 7 almost always). Mean scores exceeding 4.0 indicate significant burnout symptoms (Soares, Grossi & Sundin, 2007).

2.5.4 The Maslach Burnout Inventory (MBI)

The Maslach Burnout Inventory (MBI) is generally acknowledged that the most widely accepted definition of burnout is represented by Maslach three-component conceptualisation of burnout (Cropanzano, Rupp & Byrne, 2003; Worley, Vassar, Wheeler & Barnes, 2008). The scale consists of 22 items comprising three subscales. The first subscale 'Emotional Exhaustion' consists of nine items to assess feelings of being emotionally overextended and exhausted by one's work. The second subscale

‘Depersonalisation’ consists of five negative items to assess unfeeling and impersonal response towards recipients of one’s care. The third subscale ‘Personal Accomplishment’ consists of eight items to assess feelings of competence and successful achievement in ones work with people. Most of the researchers examining this aspect of MBI validity have reported that a three-factor solution better fits their data than does a two-dimensional or a one-dimensional structure (Boles, Dean, Ricks, Short & Wang, 2000; Schutte, Toppinen, Kalimo, & Schaufeli, 2000). Reliability, estimated by Cronbachs was 0.90 for the EE subscale, 0.79 for the DP subscale and 0.71 for the PA subscale (Maslach & Jackson 1981). Regarding discriminant validity, Schaufeli, Bakker, Hoogduin, Schaap & Kladler (2001) determined that scores from the MBI discriminated individuals who are “burned out” from those that are “non-burned out” in clinical and non-clinical samples.

The MBI is scored on a 7-point scale from never (0) to everyday (6) and yields three subscale scores. Low burnout: EE score 0±18, DP score 0±5, PA score 40+; Moderate burnout: EE score 19±26, DP score 6±9, PA score 34±39; High burnout: EE score 27+, DP score 10+, PA score 0±33. It should be noted that high levels of EE and DP and low levels of PA are anticipated in the individual who is burned out. All exhaustion and cynicism items are phrased negatively, whereas all personal accomplishment items are phrased positively, so the positively worded achievement items are then reversed in order to be indicative of reduced efficacy (Qiao & Schaufeli, 2011).

The emotional exhaustion dimension has been consistently viewed as the core component of the MBI (Moore, 2000). Demerouti, Bakker, Vardakou & Kantas (2003) has suggested that the exhaustion component of burnout should not only include

emotional exhaustion-as in the MBI-but other aspects of exhaustion as well, such as cognitive and physical exhaustion. In order to avoid answering bias, burnout inventories should include both negatively and positively phrased items (Demerouti et al, 2003). The exhaustion and cynicism scales of the MBI contain only negatively phrased items, which would undermine the validity of these scales.

The MBI was created using the word "recipient" to refer to an individual for whom services are provided. In this study the word "recipient" relates to consumers of nursing services (patients).

2.6 Programmes to reduce burnout among nurses

Burnout is a serious problem among nurses. Unfortunately, few studies have investigated methods of reducing or preventing burnout among nurses. While research has revealed much regarding what factors contribute to the development of burnout, few studies have explored how to reduce burnout once it has occurred. In order to prevent or reduce burnout among nurses, different programmes, based on different theoretical backgrounds and techniques, were carried out. Some of these programmes and their effectiveness are described below:

Redhead, Bradshaw, Braynion & Doyle (2011) evaluated a psychological intervention (PSI) training course for qualified and unqualified English nurses employed in a low-secure department. By random selection, 42 nurses (21 of them were qualified) were considered as experimental training group. Before and after the PSI training programme, burnout was assessed. The only significant change in burnout was a

reduction in depersonalisation for qualified nurses in the experimental group but the training did not incur protection against burnout.

Isaksson, Gude, Tyssen & Aasland (2010) investigated the change in burnout dimensions after a counselling intervention for Norwegian nurses. Follow-up assessment was completed after one year of intervention. The level of emotional exhaustion was significantly reduced, to the level found in other Norwegian nurses. After the counselling intervention, occupational conflict and absences for being sick were negatively correlated with this reduction.

Kravits, McAllister-Black, Grant & Kirk (2010) developed and evaluated a psycho-educational programme to assist US oncology nurses in developing plans of stress management. The intervention comprised discussion of nursing risk factors, practicing relaxation techniques, and art technique. MBI was used before and after the programme to assess the level of burnout. Results indicated that the course was useful in reducing levels of emotional exhaustion.

Gunusen & Ustun (2010) aimed to evaluate the effects of coping and support group interventions to reduce burnout among 108 nurses at a University Hospital in Izmir, Turkey by conducting a randomised controlled trial (RCT). MBI was used before and after the intervention as well as in the following 6 months. Directly after the intervention, reduction in emotional exhaustion was noted. After 6 months, scores were increased again. Both depersonalisation and personal accomplishment did not change after the intervention.

A randomized controlled trial by Peterson, Bergstrom, Samuelsson, Asberg, & Nygren (2008) investigated the use of a peer-support group to improve nurses' perceived health,

burnout, and work conditions. They based their study on unspecified social support, change, and communication theories. Of the 3,719 Swedish participants (including nurses) who completed the General Nordic Questionnaire for Psychological and Social Factors at Work and a Swedish version of the OLBI, 660 scored above the 75% percentile of the exhaustion dimension on the OLBI. Of these, 131 participated in the study. Those in the intervention group met for two hours every week for ten weeks. All participants completed questionnaires at the beginning of the study as well as seven and ten months after the intervention, and researchers analysed qualitative session content. At the end of the study, the intervention group reported less stress and burnout along with other improvements.

Blanc, Hox, Schaufeli, Taris & Peeters (2007) evaluated the effects of a team-based burnout intervention programme on oncology nurses. Participants consisted of 29 staff in 9 oncology wards. Burnout levels were assessed by completing a Dutch version of the MBI's emotional exhaustion and depersonalization scales before starting the programme (Time 1), right after ending the programme (Time 2), and after 6 months (Time 3). Results showed significant reduction in emotional exhaustion among experimental group at both Time 2 and Time 3 and less depersonalisation at Time 2, when comparing with control group.

Estryn-Behar et al (2007) studied 28,561 nurses from a stratified sample of ten European countries to determine how social work environment, teamwork characteristics, burnout, and personal factors affect a nurse's intent to leave. Participants completed a 260-item questionnaire developed for the NEXT research project about their work history, private lives, work environment and demands, and future plans. Multiple factors including

quality of teamwork and interpersonal relationships were shown to affect participants' intent to leave.

Mackenzie, Poulin & Seidman-Carlson (2006) used a brief 4-week mindfulness-based stress reduction programme to reduce burnout in 16 nurses. Results indicated significant improvements in burnout symptoms, relaxation, and life satisfaction among experimental nurses. The results of this programme suggest that mindfulness training is an effective way for managing stress among nurses.

Zhu, Wang, Wang, Lan & Wu (2006) indicated that nurses' burnout can be prevented by reducing or keeping moderate professional duties and responsibility, making clearer job descriptions, promoting leisure activities, and enhancing self-care capabilities.

A pilot study by Barnard, Street & Love (2006) explored the relationship between stress, work supports, and burnout among oncology nurses. The researchers did not describe a theoretical framework. One hundred one registered nurses in Australia completed an unnamed questionnaire about work supports, the Stressor Scale for Paediatric Oncology Nurses, and the MBI. Results showed that most oncology nurses' support comes from peers and that this support decreases stress and increases personal accomplishment.

Medland & Howard-Ruben (2004) suggested that oncology nursing leadership, recognizing the potential for stress and burnout inherent in this profession, should research and develop programmes to enhance staff coping skills and mutual support.

A randomized controlled trial by Bittman, Bruhn, Stevens, Westengard & Umbach (2003) researched the use of a group-based six-session recreational music-making protocol using drums and keyboards to reduce burnout and total mood disturbance (TMD) among 112

long-term care workers at a retirement community in Pennsylvania. Participants completed the MBI and Profile of Mood States immediately prior to the study, at the end of six weeks, and at the end of twelve weeks. Results showed that the recreational music-making protocol reduced burnout and TMD levels. While Bittman et al (2003) evaluated whether a group-based activity improves burnout, other researchers have focused on group-based discussion as a method of decreasing burnout levels.

Ewers, Bradshaw, McGovern & Ewers (2002) evaluated the effect of Psychosocial Intervention Training (PSI) on the levels of burnout in a 20 randomly selected psychiatric nurses. The participants were randomly allocated either to receive the training or to a waiting list control group. The duration of the programme was 6 months. MBI was conducted to assess the level of burnout among experimental and control nurses before and after the programme. Experimental nurses showed significant decrease in burnout levels, whilst staff in the control group showed a small but non-significant increase in burnout.

After reviewing the literature of intervention programmes, one can conclude that different programmes have been used in different studies. Some programmes were effective while some are not. Not all programmes reduced all dimentions of burnout as some changed the level of one dimension while some two dimensions.

2.7 Concluding remarks

This chapter presented the available literature on burnout among nurses. It discussed the emerging definition and classifications of burnout based on different selective theories and models, which provide a more rational platform for phenotyping and better

understanding of the problem and the possible methods for management. The signs and symptoms of burnout, which are common, will challenge nurses, health care systems, and managers to identify effective ways of optimising well-being among nurses with burnout.

This chapter highlighted the general problems faced by nurses with burnout in different countries according to their continents (including developed and developing countries) with more focusing on the current situation in Gaza after the war and the continuation of siege. The living conditions of the nurses in Gaza add more challenges to successful management of nurses and place those nurses at greater risk for complications and reduced psychological well-being. Improving these conditions and providing nurses with the basic management requirements, within the existing resources, might improve their level of burnout and functioning. Furthermore, in order to fully understand the experiences of the nurses and assist them in managing their stressful conditions and improving their well-being, it is important to have knowledge of their management styles, their level of perceived stress and burnout, their views on specific domains of stress and burnout, and their ways of dealing with them.

A survey of the literature on nurses reveals that although a great deal of research has been carried out relating to burnout internationally, nothing has been written about nurses in Gaza Strip. Looking at the current situation in Gaza, there is a need to conduct this study.

CHAPTER 3

METHODOLOGY OF THE BURNOUT SURVEY (PHASE ONE)

This chapter presents the study design, setting of the study, duration of the study, study population, sample and sampling techniques: inclusion criteria and exclusion criteria, translating of the questionnaire into Arabic: testing of the questionnaire, demographic data, measuring burnout, the pilot study, data collection procedures delivering questionnaire, data management: keeping records, data entry, collection of questionnaire, ethical considerations, constraints and difficulties of the study, and data analysis.

A greater understanding of the study methodology in burnout research may help or develop a critically balanced review of the substantive content of the growing body of burnout literature.

3.1 Study design

As part of the process of planning burnout research, the researcher selected a research design that provides a framework within which to conduct research which will produce answers to his chosen research questions.

The aim of this study was to explore the prevalence and nature of burnout in a population of nurses in Gaza-Palestine, and then to develop a strategy for reducing burnout and test its effectiveness. For meeting the purpose of the first part of the present research, a quantitative survey design was used. Using a questionnaire is by far the quickest, cheapest, and relatively confidential method of collecting large amounts of information in social and health research. This design is commonly used to identify

prevalence of burnout among nurses and other health care workers. The technique that was employed in this study was the self-administered questionnaire.

3.2 Setting of the study

Phase one of the study was conducted at 16 hospitals in the Gaza Strip, which are Kamal Odwan, Al-Awda, Beit Hanoon, AL Shifa, Ophthalmic, Paediatric Naser, Khan-Younis (Nasser), Dorra, Emirati Crescent (Rafah), Rantissi, Aqsa, Mubarak, Najjar, Psychiatric, and European hospitals. One hospital was excluded; Al-Wafaa hospital, for personal safety and security reasons, as it is close to the Israeli borders and subject to attack.

3.3 Period of the study

The fieldwork and collection of the data in the Gaza Strip for the first part took place from October 2010 through to January 2011. Upon the arrival of the investigator in the Gaza strip, he contacted experienced research assistants and trained them on the recruitment of participants for the study and the manner in which the questionnaire should be distributed.

3.4 Study population

The study population in this study comprised the entire cohort of nurses working in 16 hospitals in Gaza. Since it is the first study in Gaza about burnout among hospital nurses, a complete enumeration of nurses in Gaza was undertaken.

3.5 Sample and sampling technique

The sample of phase one comprised the whole study population. All available employment data of nurses from the Nu[illegible]Unit and the hospitals administrations in Gaza Strip were screened for subjects. Nurses who had been working in the hospital at the time of the study were defined as subjects. More than 500 nurses are working in Shifa hospital as it is the biggest hospital in Gaza, and more than half (334) of these nurses are male. Where the participants were employed in more than one hospital, they needed to respond only once. So, a question was added to the questionnaires asking if they worked in more than one hospital and indicating that an answer is wanted from one employment site only. They were asked to give details of their other employment in terms of the hours worked. Prior to the data collection process, the instruments were piloted to examine the research tools in terms of acceptability, applicability, and the time frame. Three researcher assistants collected the data simultaneously over a two months period.

3.5.1 Inclusion criteria

All registered nurses employed in the hospitals in the Gaza strip were eligible to participate in this study if they were nursing graduates of either technological institutions or universities, working in Gaza hospitals departments, and agree to participate in this study.

3.5.2 Exclusion criteria

Thirty nurses, who participated in the pilot study, were excluded from the main study to prevent bias due to repeating the same questionnaire. Nurses who studied for less than

two years in nursing were excluded. Any nurse with qualification less than two years nursing programme was excluded too, because nurses who completed a nursing course that lasted for less than two years are not considered as registered nurses and are not members of Palestinian Nursing Association-Gaza. Nurses working in Al-Wafaa hospital were excluded for personal safety of the researcher.

3.6 Data collection procedure

The objectives and research questions determined the nature and the scope of the data which needed to be collected. In this study, the objectives and research questions called for data to be collected on burnout levels. A quantitative approach to the collection and analysis of data was used. The investigator and his research assistants reached the eligible subjects to conduct the study and to fill the questionnaire in different hospitals in Gaza.

3.6.1 Testing out the questionnaire pack

In order to enhance the pack's content validity, five expert nurses with postgraduate studies were asked for their opinion on the pack's construction and to look to any ambiguities. They were asked to complete the questionnaire pack as if they were an actual participant.

3.6.2 Pilot testing

A pilot study also called a pilot experiment is a small scale preliminary study conducted before the main research in order to check the feasibility or to improve the design of the research (Haralambos & Holborn, 2000: 998). This pilot helps to test the feasibility of

the study design, the data collection techniques, logistical issues and can also provide an opportunity to analyse the data (Burns & Grove, 2007). Also, it gives a fair idea about the length of the questionnaires, and whether all the respondents understand the questions in the same way. In addition, the pilot study participants will be given the chance to add any comments they consider helpful or important to enhance the readability or clarity of the survey.

A pilot study was conducted with thirty (n=30) volunteers who were eligible for inclusion in the main study. To enhance the reliability of the instrument, "test-re-test" was done and the same questionnaire re-administered to the same 30 nurses after three weeks. The result showed similar answers and responses. Cronbach's Alpha for MBI dimensions was: Emotional Exhaustion (0.86), Depersonalisation (0.77), and Personal Accomplishment (0.78). There is not a commonly agreed Cronbach's Alpha cut-off but usually 0.7 and above is statistically acceptable (DeVon, Block, Moyle-Wright, Ernst, Hayden, Lazzara, Savoy & Kostas-Polston, 2007).

After ethical permission was obtained Palestinian Ministry of Health, approval to conduct the pilot study was acquired from nursing administration of each hospital included. Those who participated in the pilot study were excluded from the final study to prevent bias due to repeating the same questionnaire.

3.6.3 Demographic data sheet

In addition to these questionnaires, a general information questionnaire recording the demographic and professional features of the participants of the study was formulated

by the researcher (these variables included: gender, age, qualifications, experience, specialisation, salary, marital status, night shifts and extra work).

3.6.4 Measuring burnout among nurses in this study by MBI

The Maslach Burnout Inventory (MBI) was chosen to measure burnout among hospital nurses in Gaza Strip because:

- It is widely accepted for use of measuring the frequency with which nurse experiences symptoms of burnout (Weckwerth & Flynn, 2006).
- It has been used in Arabic-speaking nurses as in (Hamaideh, 2011; Al-Turki et al, 2010) and in particular in Palestinian nurses in the West Bank (Abushaikha & Saca-Hazboun, 2009), but unfortunately the investigator could not get the Arabic version from the mentioned authors.
- It has an extensive empirical research supported data base.
- It operationally defines burnout on three separate scores (EE, DP, & PA) and is geared specifically to workers in the human service professions (Bahner & Berkel, 2007).
- It can be completed in about 15 minutes.
- Scoring of the 22-item instrument is quickly achieved by the researcher with a clear key.

For more accuracy, caution in interpretation is recommended, however, as consideration must be given to the population studied, the culture of the work setting, as well as the nationality where the research is being carried out (Schutte et al, 2000).

3.6.5 Translating the questionnaire pack into Arabic

The most commonly applied technique is the back-translation technique. The advantage of the back translation technique is that it offers the opportunity for revisions to enhance the reliability and accuracy of the translated instrument (Van de Vijver & Leung, 2000). The investigator followed the technique of (Paunovic & Ost, 2005; Swigris, Gould & Wilson, 2005): using the process of back translation and bilingual technique. The questionnaire was translated into Arabic by two independent translators. The investigator explained to each translator the importance of the independent translation in order to judge reliability. Each translation was compared and double checked for accuracy and the communication of the Arabic meaning for the words. As the questionnaire translation was reviewed, the meaning, clarity and the appropriateness to the cultural values of the intended subjects were assured. The final Arabic version was then translated back into English by two Arabic experts who were fluent in both the English and Arabic languages, and checked against the original English version. Finally, when the two English versions were compared to validate the Arabic version, there was a high degree of equivalence and was subsequently used in this study.

3.6.6 Delivering the questionnaire packs

Each participant in the main study was handed a questionnaire package identified by his or her name on the envelope. The envelope contained an information letter, the questionnaire, and an empty envelope for the return of the completed questionnaire. The participant unique ID was placed on the top of demographic information questionnaire. After completing the questionnaire, anonymous questionnaires were returned placing them in special boxes available in each department for this purpose.

3.7 Data management

3.7.1 Keeping records

A confidential ID number/participant 63 list and spread-sheet was designed for keeping records. This ensured that only one set of central records needed to be kept so the data collection records remained confidential.

3.7.2 Collection of questionnaires

Three researcher assistants collected the questionnaires simultaneously weekly over a three weeks period.

3.7.3 Data entry

Data entry was carried out by the researcher. In line with the ethical demands of the study, no personal details that enabled participants to be identified, other than respondent ID numbers were entered to (SPSS 17.0). The total number of responses entered to SPSS was 1330. This number did not include the 30 responses from the pilot study.

3.8 Constraints and difficulties of the study

The researcher faced many difficulties during data collection. The main constraint of this study was a strike by hundreds of nurses. Those nurses did not come to work due to political issues, so they were not included in this study. One of the greatest problems during data entry was the cutting off electricity for more than 12 hours daily.

3.9 Ethical considerations

Approvals from Human Research Ethics Committee (HREC) (Medical) of the University of Witwatersrand and the I 65 h Ethics committee of the Palestinian Ministry of Health were obtained. The following ethical issues were considered in order to accomplish this study:

a. Informed consent: Informed consent was obtained by the provision of an information leaflet, which participants were asked to read prior to making a decision as to whether or not to complete the questionnaire. The leaflet contained information about the investigator, including his contact details, the purpose of study, measures addressing anonymity and confidentiality issues. In this study, consent was implied by the return of a signed consent form with completed set of questionnaire.

b. Protection from discomfort and harm: Participants were assured that the researcher had ensured that systems had been made available to deal with high stress scores. This included the contact details of a number of pertinent support services in the information leaflet and by offering participants the opportunity to make unsolicited contact with the investigator.

c. Privacy, confidentiality and anonymity: A closed envelope containing the questionnaire and the information leaflet was given to each participant in person. Individual participants would not be identifiable from their responses. Because of the concern about high-risk respondents, total anonymity couldn't be guaranteed. A list of participant names and corresponding ID numbers was produced. Each participant was assigned a unique ID number. Only one copy of the sheet containing participant names with the corresponding ID numbers was produced and only the investigator had access

to it. For data protection, no one had access to the password protected computer containing any raw data. Only the investigator was able to access this information.

3.10 Data analysis

Data were checked by my supervisors (Dr Gayle Langley and Dr Sami Abu Izhaq) and further advice was asked from an expert statistician (Dr Aed AlRebei). Data and calculations were analysed using the SPSS.17 (SPSS Inc, Chicago, IL, USA) statistical system. Descriptive statistics and frequency distributions were generated to make comparisons among the demographic variables and the burnout profile of the hospital nurses. More data analysis was carried out to answer research questions.

Since there is no overall score of MBI (Maslach & Jackson, 1981), the scores of each MBI sub-scale were evaluated separately for each participant. In this study, high levels of burnout was indicated by high scores in emotional exhaustion and depersonalisation and low scores in personal accomplishment subscale (Ozyurt, Hayran & Sur, 2006). The same criteria were applied to average and low burnout.

The t-test (or student's t-test) was used to test for a difference between two independent groups on the means of a continuous variable (Tas, 2011). In this study, it was used to evaluate the significant differences between gender of hospital nurses (male, female), hospital type (public, private) and extra work (yes, no). As example, comparison of means between male and female nurses was obtained to determine which mean is higher when there is significant difference.

The analysis of variance (ANOVA or F-test) was used to evaluate the differences in the questionnaires among the different groups of hospital nurses due to age, years of experience, specialisation, qualifications, marital status, night shifts, and salary. In case of the presence of significant differences in the questionnaire among the groups and the independent variable composed of more than one level, a "Tukey post-hoc" test was used to identify the differences between the groups.

For t-test and ANOVA, Levine's test was used to evaluate homoscedasticity (homogeneity of covariances). If P-value for value of F is less than 0.05, this indicates that the variances are not homogenous which violates a key assumption of the t-test and ANOVA.

Effect size of Cohen's d was calculated for t-tests. Cohen's d is defined as standardised difference between two groups. Its value according to Cohen (1988): 0.20 small effects, 0.50 medium effects and 0.80 large effects. Effect size of eta-squared ($\eta 2$) was calculated for ANOVA. Eta-squared is defined as the proportion of total variation attributable to the factor, and it ranges in value from 0 to 1 (Cohen, Cohen, West & Aiken, 2003). Its value according to Cohen (1988): 0.01 small effect, 0.06 medium effect and 0.14 a large effect.

CHAPTER 4

RESULTS OF THE BURNOUT SURVEY

This chapter is a major part of the study presenting the results of the work carried out in Gaza Strip. Our study population composed of 1330 hospital nurses. The sources of results were administered by a structured questionnaire (closed ended questions) namely Maslach Burnout Inventory (MBI). This chapter composed of four parts. The first part provides descriptive statistic and frequency distributions about the socio-demographic characteristics among hospital nurses. The second part focuses on the differences in levels of burnout and related concepts due to demographic variables. The third part introduces the prevalence of burnout among hospital nurses.

4.1 Distribution of the study population by demographic variables

Socio-demographic characteristic in this study composed of several parts: gender (male, female), hospital type (public, private), age (19-30, 31-40, 41-50, 51-60), experience (1-5, 6-10, 11-15, >15), specialisation (medical, surgical, paediatric, operating room, ICU, emergency, maternity, office, outpatient clinics, psychiatric), qualifications (associate degree, 3 years diploma, bachelor, postgraduate), marital status (single, married, divorced/widowed), night duties per month (0-5, 6-10, >11), salary in USD (<300, 300-600, 601-900, >900) and extra work (yes, no). Because nurses are exposed to burnout, it is important to understand the relationship between these socio-demographic variables and burnout.

As shown in table 4-1, a total of 47.3% were women and 52.7% were men in the total sample (n=1330). Age varied between 20 (minimum) to 60 years old (maximum) and

the mean age was 31.78 years (standard deviation 7.66). About 55% of participants were younger than 31 years old and more than 46% had experience of less than 6 years which indicates that nursing community in Gaza is young. A total of 92.6% of the nurses delivered care and 7.4% were directors, supervisors or positions directly linked to management; the highest number of participants was from 'medical' departments (16.5%). In this study, oncology and dialysis were classified as medical, nursery as paediatric and burn as surgical specialisation. Most of participants were from public hospitals (92.7%), while 7.3% were from private hospitals. The highest number of participants was from Shifa hospital (28.8%), while the lowest number was from the psychiatric hospital (1.6%). Most of nurses (78.0%) are married and very few nurses are divorced/widowed (1.3%). About 46% of nurses work 6 nights or more per month while 29% work straight day. More than 50.2% of nurses had bachelor degree in nursing while few had postgraduate degrees (3.8%). Monthly salary varied between $200 (minimum) to $1300 (maximum) and the mean salary was $620. More than 50% of participants had a monthly salary of less than $600. This indicates that the economic situation in the Gaza Strip has severely deteriorated. Finally, 33.5% of the participants work extra time in other hospitals, private clinics and university as clinical instructors.

Table 4-1: Distribution of the study population by demographic variables

Variable	Definition	Frequency	Valid Percent
Gender	Male	701	52.7
	Female	629	47.3
Hospital type	Public	1233	92.7
	Private	97	7.3
Age	19-30	726	54.6
	31-40	409	30.8
	41-50	162	12.2
	51-60	33	2.5
Experience	1-5	614	46.2
	6-10	461	34.7
	11-15	119	8.9
	>15	136	10.2
Specialisation	Medical	219	16.5
	Surgical	215	16.2
	Paediatric	190	14.3
	Operating room	100	7.5
	Maternity	138	10.4
	ICU	157	11.8
	Office	99	7.4
	Emergency	117	8.8
	Outpatient clinics	74	5.6
	Psychiatric	21	1.6
Qualification	Associate degree	512	38.5
	3years diploma	101	7.6
	Bachelor	667	50.2
	Postgraduate	50	3.8
Marital status	Single	275	20.7
	Married	1038	78.0
	Divorced/widowed	17	1.3
Night shifts	<5	1013	76.1
	>5	317	23.9
Extra work	Yes	446	33.5
	No	884	66.5
Salary in USD	<300	25	1.9
	300-600	646	48.6
	601-900	558	42.0
	>900	101	7.6

4.2 Prevalence of burnout in nurses as measured by MBI

As shown in Table 4-2 out of the total of the 1330 respondents who completed the MBI, 477 (35.9%) respondents scored low on emotional exhaustion, 256 (19.2%) respondents scored moderate while 597 respondents (44.9%) scored high on the subscale. Two hundred and eighty eight (21.7%) respondents scored low on the depersonalisation subscale while 329 (24.7%) scored moderate on the subscale. The majority of the respondents (n=713, 53.6%) scored high on the subscale. Three hundred and seventy one (27.9%) respondents scored above 39 in the personal accomplishment category, 182 (13.7%) respondents scored moderate while 777 (58.4%) nurses scored below 34 in the category.

Table 4-2: Prevalence of burnout based on MBI subscale scores

Subscale	Mean (SD)	Burnout		
		Low	Moderate	High
		No (%)	No (%)	No (%)
Emotional Exhaustion (EE)	24.27 (11.36)	477 (35.9)	256 (19.2)	**597 (44.9)**
Depersonalisation (DP)	11.35 (6.84)	288 (21.7)	329 (24.7)	**713 (53.6)**
Personal Accomplishment (PA)	31.45 (10.05)	**777 (58.4)**	182 (13.7)	371 (27.9)

Table 4-3 shows that the greatest symptom of emotional exhaustion appears to be “I feel like I’m at the end of my rope” (mean=2.73), followed by “I feel emotionally drained from work” (mean=2.60). The least frequent symptom of emotional exhaustion is “I feel frustrated by job” (mean=2.56). The greatest symptom of depersonalisation appears to be “I feel patients blame me for their problems” (mean=2.38), followed by “I treat patients as impersonal objects” (mean=2.29). The least frequent symptom of emotional exhaustion is “I don’t really care what happens to patients” (mean=2.24). The greatest

symptom of low personal accomplishment appears to be “I deal effectively with the patients’ problems” (mean=3.83), followed by “I can easily understand patients’ feelings” (mean=3.85). The least frequent symptom of low personal accomplishment is “I can easily create a relaxed atmosphere” (mean=4.00).

Table 4-3: Frequency of burnout symptoms by items

STATEMENT	Mean	SD	Rank
Emotional Exhaustion			
I feel emotionally drained from work.	2.60	1.68	2
I feel used up at the end of the workday.	2.58	1.74	7
I feel fatigued when I get up in the morning and have to face another day on the job	2.58	2.37	6
Working with patients is a strain.	2.59	1.75	3
I feel burned out from work.	2.59	1.80	4
I feel frustrated by job.	2.56	1.80	9
I feel I’m working too hard on my job.	2.57	1.78	8
Working with people puts too much stress.	2.58	2.37	5
I feel like I’m at the end of my rope	2.73	1.80	1
Depersonalisation			
I treat patients as impersonal ‘‘objects’’.	2.29	1.63	2
I’ve become more callous toward people.	2.21	1.62	4
I worry that this job is hardening emotionally.	2.20	1.61	5
I don’t really care what happens to patients.	2.24	1.62	3
I feel patients blame me for their problems.	2.38	1.60	1
Personal Accomplishment			
I can easily understand patients’ feelings.	3.85	1.53	2
I deal effectively with the patients’ problems.	3.83	1.54	1
I feel I'm positively influencing other people's lives through my work.	3.90	1.53	3
I feel very energetic.	3.92	1.57	4
I can easily create a relaxed atmosphere.	4.00	1.54	8
I feel exhilarated after working with patients.	3.99	1.51	7
I have accomplished many worthwhile things in my job.	3.98	1.53	6
I deal with emotional problems calmly.	3.95	1.56	5

4.3 Differences of burnout levels between nurses due to demographic variables

The socio-demographic variables were divided into two groups according to the tests used to assess the difference of burnout levels between nurses. Differences of burnout levels due to gender, hospital type, night shifts and extra work were analysed by t-test, and due to age, experience, specialisation, qualifications, marital status and salary were analysed by Analysis of Variance (ANOVA).

4.3.1 Differences of MBI-EE due to demographic variables

Differences of MBI-EE due to gender, hospital type, night shifts and extra work

The independent sample t-test output table 4-4 shows that there is significant difference between means of male and female nurses in MBI-EE (P=0.000), which means that EE is higher among male nurses (trivial effect size: 0.10). It shows that there is significant difference between means of public and private hospitals in MBI-EE (P=0.000), which means that EE is higher among nurses working in public hospitals (large effect size: 0.86). It shows that there is no significant difference between means of extra work and no extra work in MBI-EE (P=0.059). Also, it shows that there is significant difference between means of working 0-5 and more than 5 nights monthly MBI-EE (P=0.000), which means that EE is higher among nurses working more than 5 nights monthly (trivial effect size: 0.12).

Table 4-4: Differences of EE due to gender, hospital type, extra work and night shifts

MBI-EE		N	Mean	SD	t value	P	Diff-means (95% CIs)	d
Gender	Male	701	24.5	11.6	3.606	**0.000**	2.4 (1.1, 3.7)	**0.10**
	Female	629	22.1	12.9				
Hospital type	Public	1233	24.2	12.1	8.751	**0.000**	11.0 (8.6, 13.5)	**0.86**
	Private	97	13.2	9.1				
Extra work	Yes	446	22.5	13.0	-1.889	**0.059**	-1.3 (-2.7, 0.1)	
	No	884	23.8	11.9				
Night shifts	<5	1013	23.0	12.3	-2.381	**0.017**	-1.9 (-3.5, -0.3)	**0.12**
	>5	295	24.9	12.2				

Cohen's d (effect size): Trivial <0.20, Small 0.20-0.49, Medium 0.50-0.79, Large ≥0.80

Differences of EE due to age, experience, specialisation, qualifications, salary and marital status

The ANOVA output table 4-5 shows no significant differences (F=0.231, p=0.875) in age groups of nurses regarding the MBI-EE. It shows no significant differences (F=0.429, p=0.733) in experience of nurses regarding the MBI-EE. It shows significant differences (F=0.002, p=0.020) in specialisation of nurses regarding the MBI-EE (small effect size: 0.02). Tukey test output shows statistically significant effects were located among the specialisation (ICU) and (Operating room) with mean difference (5.28), (ICU) and (Maternity) with mean differences (4.90), (ICU) and (Emergency) with mean differences (5.11), (ICU) and (Psychiatric) with mean differences (9.06), which means that EE was higher among nurses working in (ICU). It shows no significant differences (F=0.755, p=0.470) in marital status regarding the MBI-EE. It shows no significant differences (F=0.732, p=0.533) in salary of nurses regarding the MBI-EE. It shows no significant differences (F=0.965, p=0.408) in qualification of nurses regarding the MBI-EE.

All previous results are largely consistent with the picture given by the CI plots in Figure 4-1, 4-2, 4-3, 4-4, 4-5, and 4-6.

Table 4-5: Differences of EE due to age, experience, specialisation, qualifications, salary and marital status

MBI-EE		N	Mean	SD	F	P	Eta-squared (η2)
Age	19-30	726	23.5	12.6	0.231	**0.875**	
	31-40	409	23.4	11.9			
	41-50	162	22.7	11.9			
	51-60	33	22.7	11.1			
Experience	1-5	614	23.0	12.6		**0.733**	
	6-10	461			0.429		
	11-15	119					
	>15	136					
Specialisation	Medical	219	23.8	12.0	2.933	**0.002**	**0.020**
	Surgical	215	23.1	10.8			
	Paediatric	190	23.8	12.6			
	Operating room	100	21.3	12.0			
	Maternity	138	21.6	12.6			
	ICU	157	26.5	14.2			
	Office	99	24.3	11.2			
	Emergency	117	21.4	12.2			
	Outpatient clinics	74	24.8	12.4			
	Psychiatric	21	17.5	16.6			
Marital status	Single	275	23.8	12.0	0.755		
	Married	1038	23.3	12.4		**0.470**	
	Others (divorced/widowed)	17	20.2	10.6			
Salary in USD	<300	25	25.9	13.0	0.732		
	300-600	646	23.0	12.7		**0.533**	
	601-900	558	23.6	12.1			
	>900	101	24.0	10.7			
Qualifications	Associate diploma	512	23.0		0.965		
	3years diploma	101	24.8			**0.408**	
	Bachelor	667	23.3				
	Postgraduate	50	25.2				

η2 effect size: Trivial < 0.001, Small 0.01-0.05 Medium, 0.06-0.13, Large ≥0.14

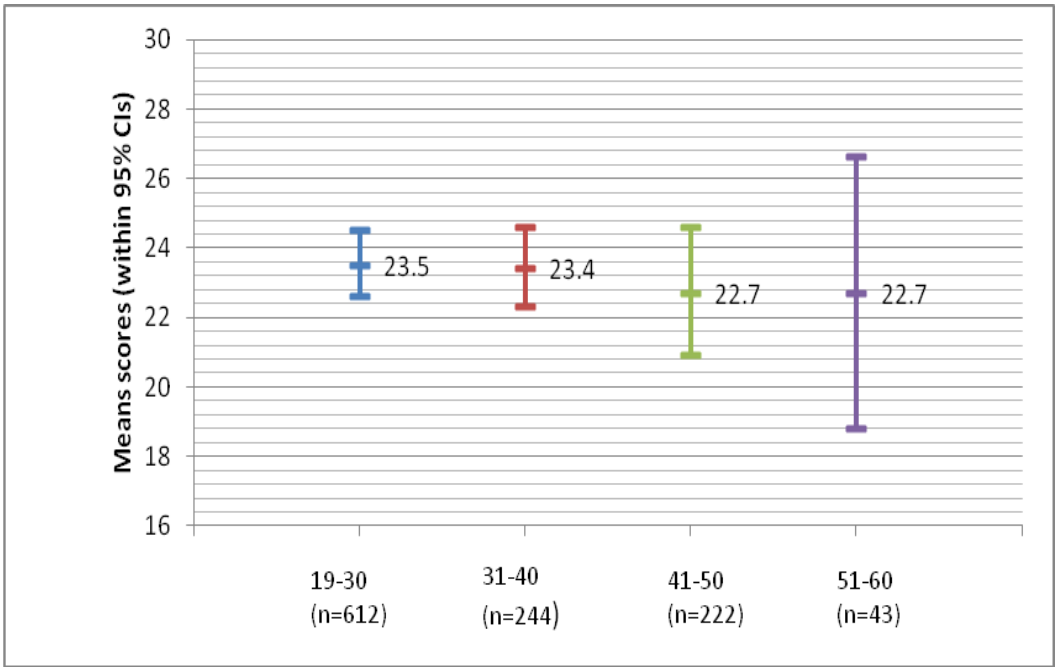


Figure 4-1 Age: plots (with 95% CIs) for MBI-EE

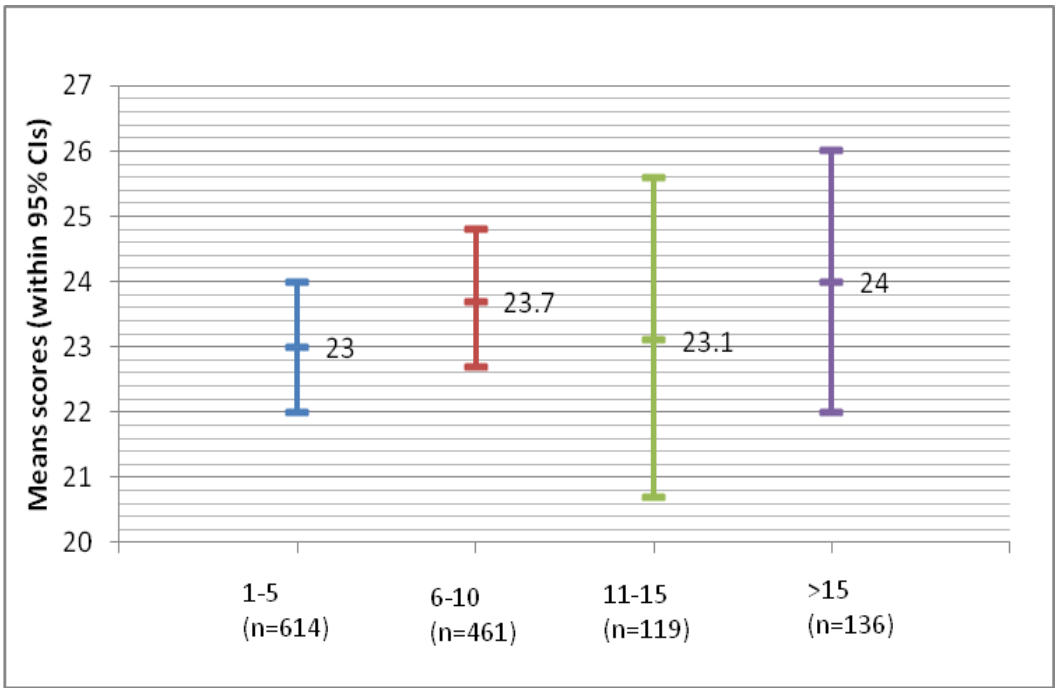


Figure 4-2 Experience: plots (with 95% CIs) for MBI-EE

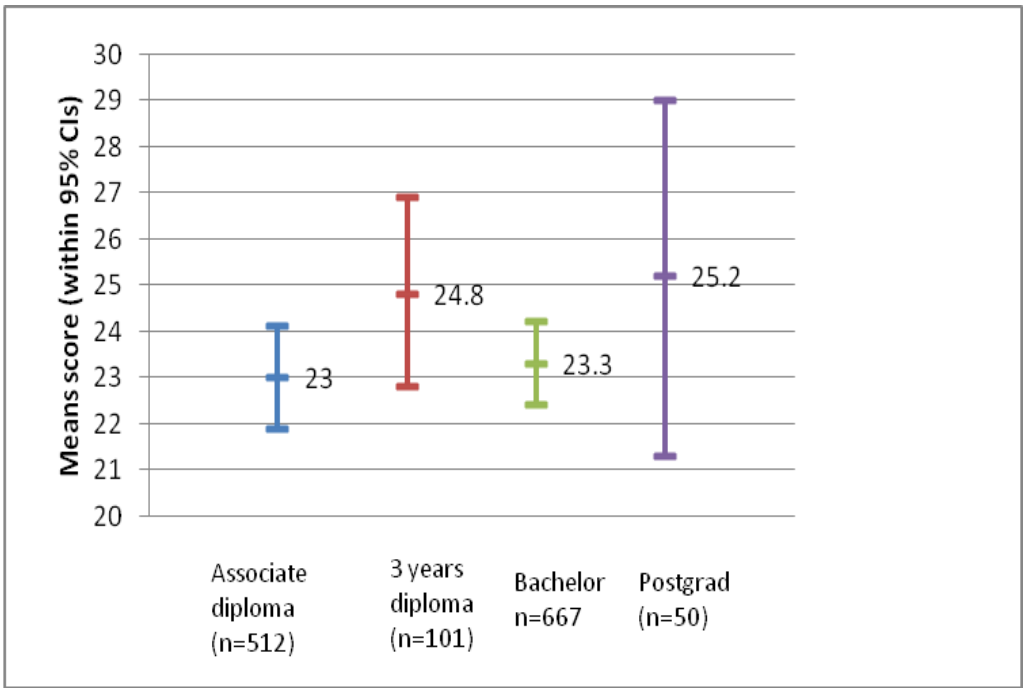


Figure 4-3 Qualification: plots (with 95% CIs) for MBI-EE

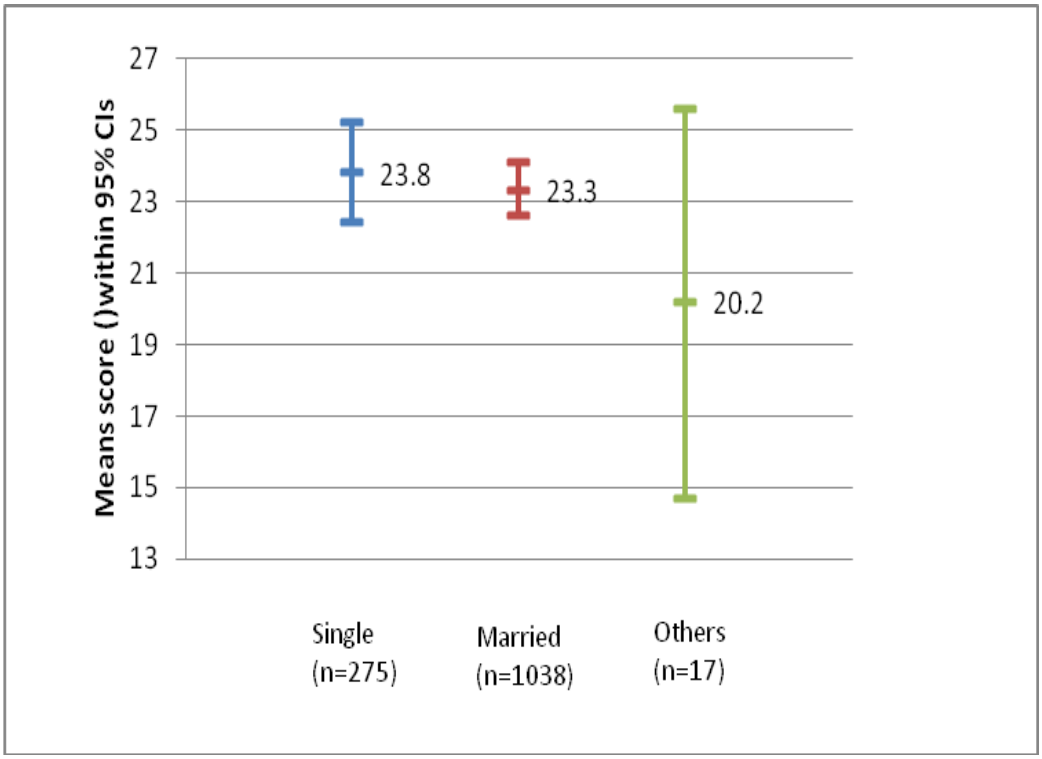


Figure 4-4 Marital status: plots (with 95% CIs) for MBI-EE

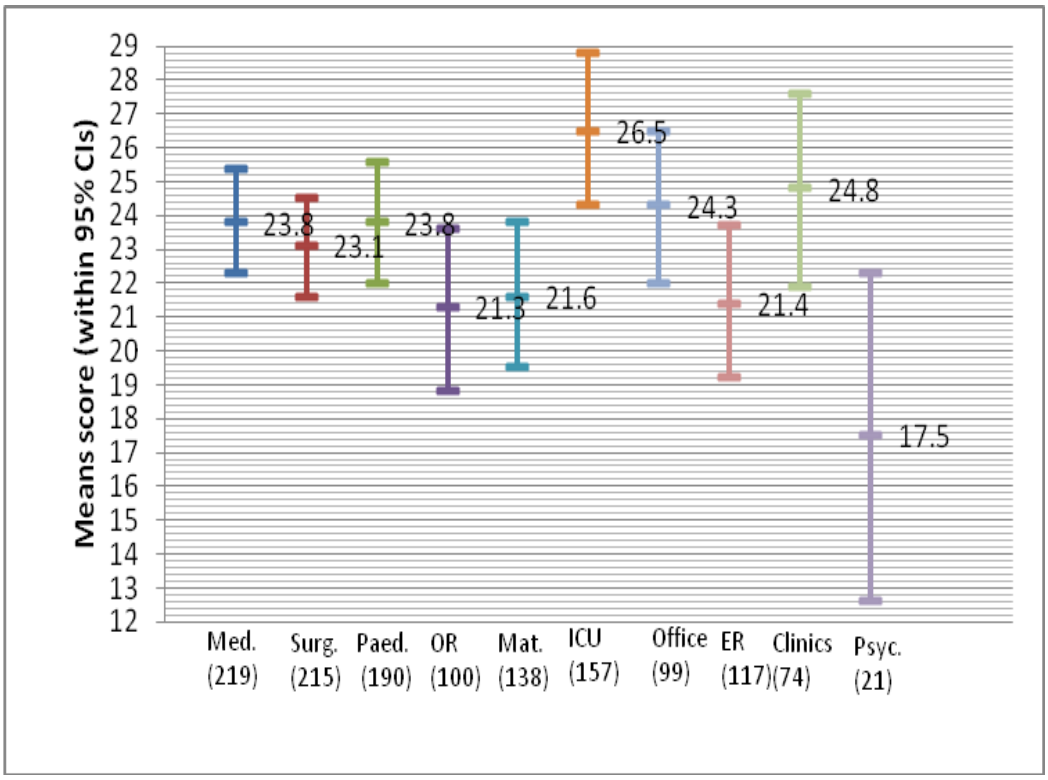


Figure 4-5 Specialisation: plots (with 95% CIs) for MBI-EE

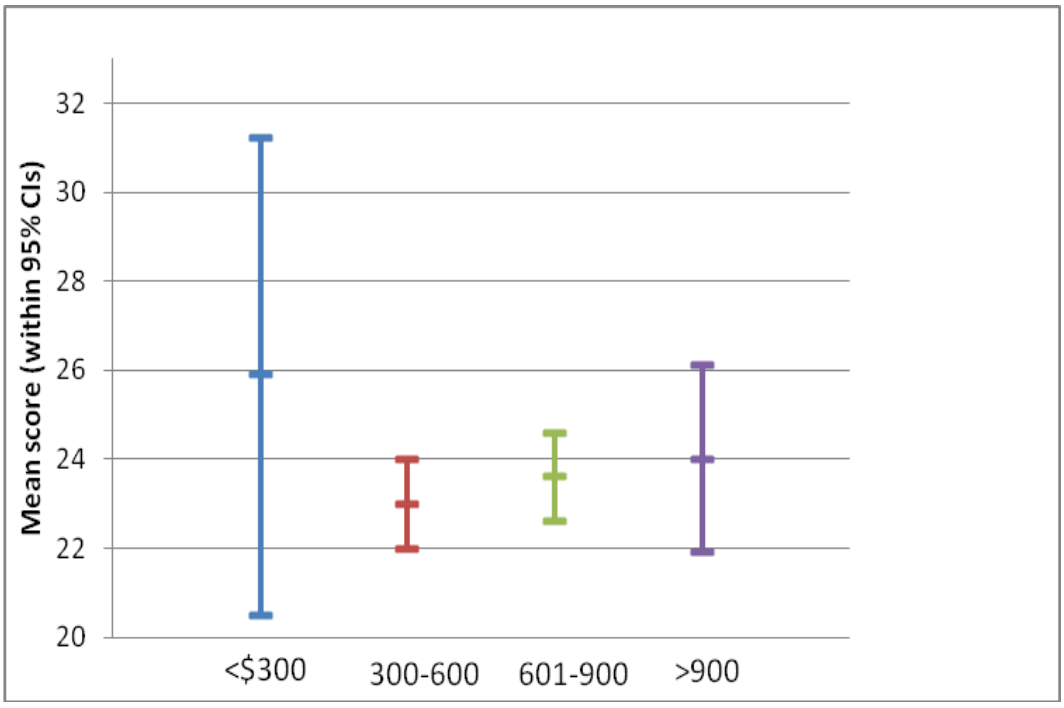


Figure 4-6 Salary: plots (with 95% CIs) for MBI-EE

4.3.2 Differences of MBI-DP due to demographic variables

Differences of DP due to Gender, hospital type extra work and night shifts

The independent sample t-test output table 4-6 shows that the means in DP was: 41.85 for male nurses and 41.56 for female nurses. Also, it shows that there is no significant difference between means of male and female in DP (P=0.691), which means that DP is similar among male and female nurses. It shows that there is significant difference between means of public and private hospitals in DP (P=0.029) which means that DP is more among nurses who work in private hospitals (small effect size: 0.31). Also, it shows that there is no significant difference between means of no extra work and extra work in MBI-DP (P=0.659), which means that DP is similar among nurses who work and do not work extra time. Finally, it shows significant difference between means of nurses regarding night shifts in DP (P=0.000), which means that DP is higher among nurses who work more than 5 nights per month (small effect size: 0.23).

Table 4-6: Differences of DP due to gender, hospital type, extra work and night shifts

MBI-DP		N	Mean	SD	t value	P	Diff-means (95% CIs)	d
Gender	Male	701	11.9	6.9	3.583	**0.000**	0.3 (-0.7, 1.3)	**0.10**
	Female	629	10.6	6.8				
Hospital type	Public	1233	11.5	6.9	4.465	**0.000**	-2.2 (-4.2, -0.2)	**0.44**
	Private	97	8.3	6.4				
Extra work	Yes	446	11.2	7.1	-0.455	**0.649**	0.4 (-1.3, 2.1)	
	No	884	11.4	6.8				
Night shifts	0-5	1013	11.2	6.9	-1.414	**0.157**	-1.9 (-2.8, -0.9)	
	>5	295	11.8	7.0				

Cohen's d (effect size): Trivial <0.20, Small 0.20-0.49, Medium 0.50-0.79, Large ≥0.80

Differences of DP due to Age, experience, specialisation, qualifications, salary and marital status

The ANOVA output table 4-7 shows no significant differences (F=0.751, p=0.522) in age of nurses regarding the DP. It shows significant differences (F=3.061, p=0.027) in experience of nurses regarding the DP (trivial effect size: 0.09). Tukey test output shows statistically significant effects were located among the experience (6-10) and (>15), with mean differences 2.18, which means that DP was higher among nurses with (6-10) years of experience. It shows significant differences (F=2.288, p=0.015) in specialisation of nurses regarding the DP (small effect size: 0.13). However, no significant differences were captured in the post hoc (Tukey) test for the specialisation as indicated previously by the ANOVA test. It shows no significant differences (F=1.959, p=0.098) in qualifications regarding the DP. It shows no significant differences (F=0.463, p=0.708) in marital status regarding the DP. All previous results are largely consistent with the picture given by the CI plots in Figure 4-7, 4-8, 4-9, 4-10, 4-11, and 4-12.

Table 4-7: Differences of DP due to age, experience, specialisation, qualifications, salary and marital status

MBI-DP		N	Mean	SD	F	P	Eta-squared (η2)
Age	19-30	726	11.2	7.0	0.986	**0.398**	
	31-40	409	11.7	6.9			
	41-50	162	11.2	7.2			
	51-60	33	9.8	5.2			
Experience	1-5	614	11.1	7.0	0.761	**0.516**	
	6-10	461	11.6	6.6			
	11-15	119	11.0	6.9			
	>15	136	11.7	7.5			
Specialisation	Medical	219	10.2	6.3	2.340	**0.013**	**0.16**
	Surgical	215	12.0	6.8			
	Paediatric	190	11.2	6.8			
	Operating room	100	11.1	6.2			
	Maternity	138	10.8	6.7			
	ICU	157	12.9	8.3			
	Office	99	11.0	6.4			
	Emergency	117	11.1	7.3			
	Outpatient clinics	74	12.2	7.4			
	Psychiatric	21	8.5	5.6			
Marital status	Single	275	11.7	7.1	0.834	**0.435**	
	Married	1038	11.2	6.9			
	Others (divorced/widowed)	17	9.8	5.4			
Salary in USD	<300	25	10.3	7.0	0.719	**0.541**	
	300-600	646	11.1	7.0			
	601-900	558	11.6	6.8			
	>900	101	11.0	6.8			
Qualifications	Associate diploma	512	11.1	7.0	0.430	**0.732**	
	3years diploma	101	11.8	5.6			
	Bachelor	667	11.3	6.8			
	Postgraduate	50	12.0	9.1			

η2 effect size: Trivial < 0.001, Small 0.01-0.05 Medium, 0.06-0.13, Large ≥0.14

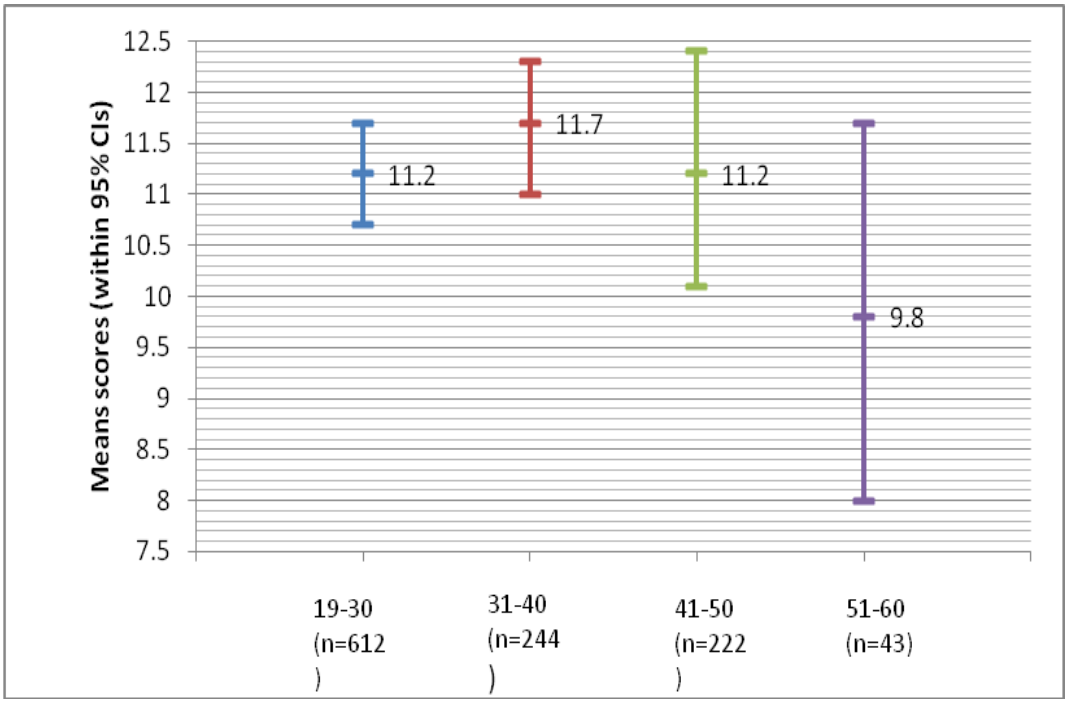


Figure 4-7 Age: plots (with 95% CIs) for MBI-DP

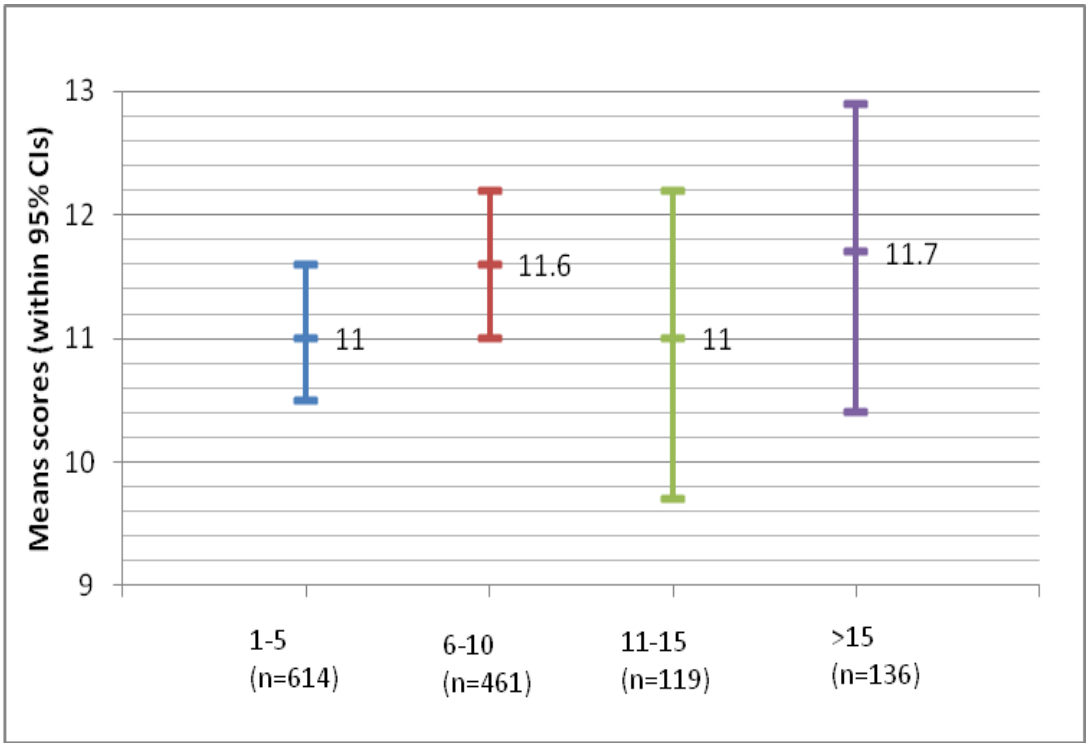


Figure 4-8 Experience: plots (with 95% CIs) for MBI-DP

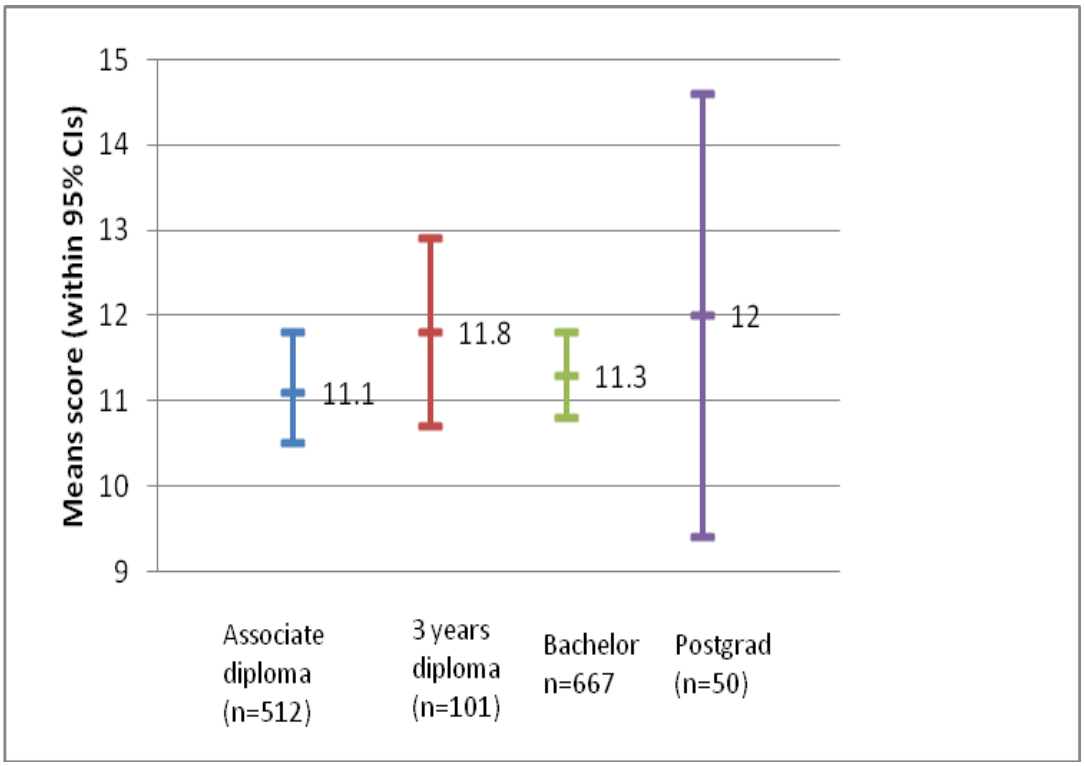


Figure 4-9 Qualification: plots (with 95% CIs) for MBI-DP

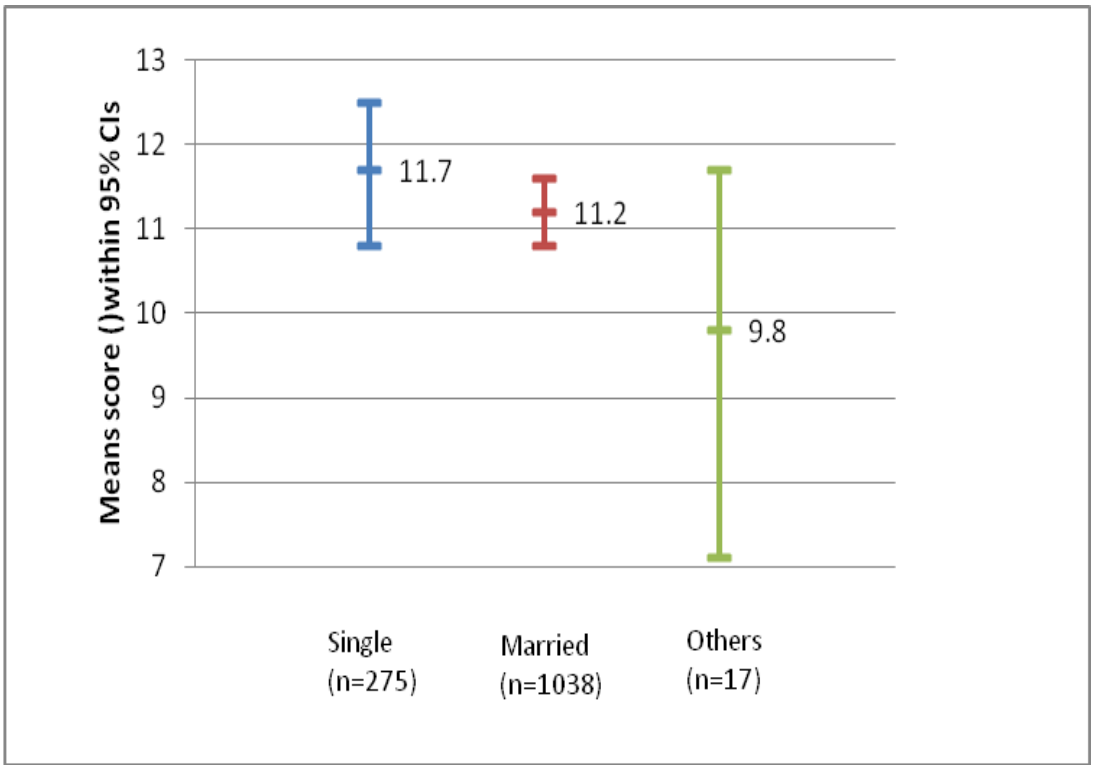


Figure 4-10 Marital status: plots (with 95% CIs) for MBI-DP

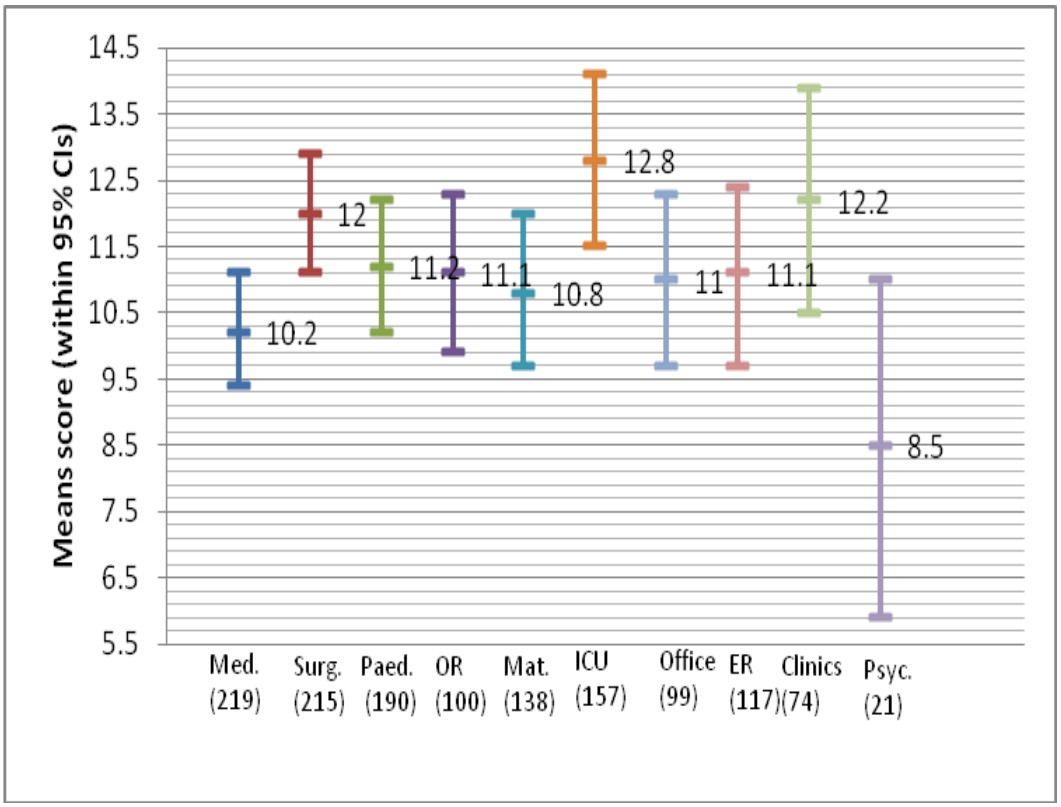


Figure 4-11 Specialisation: plots (with 95% CIs) for MBI-DP

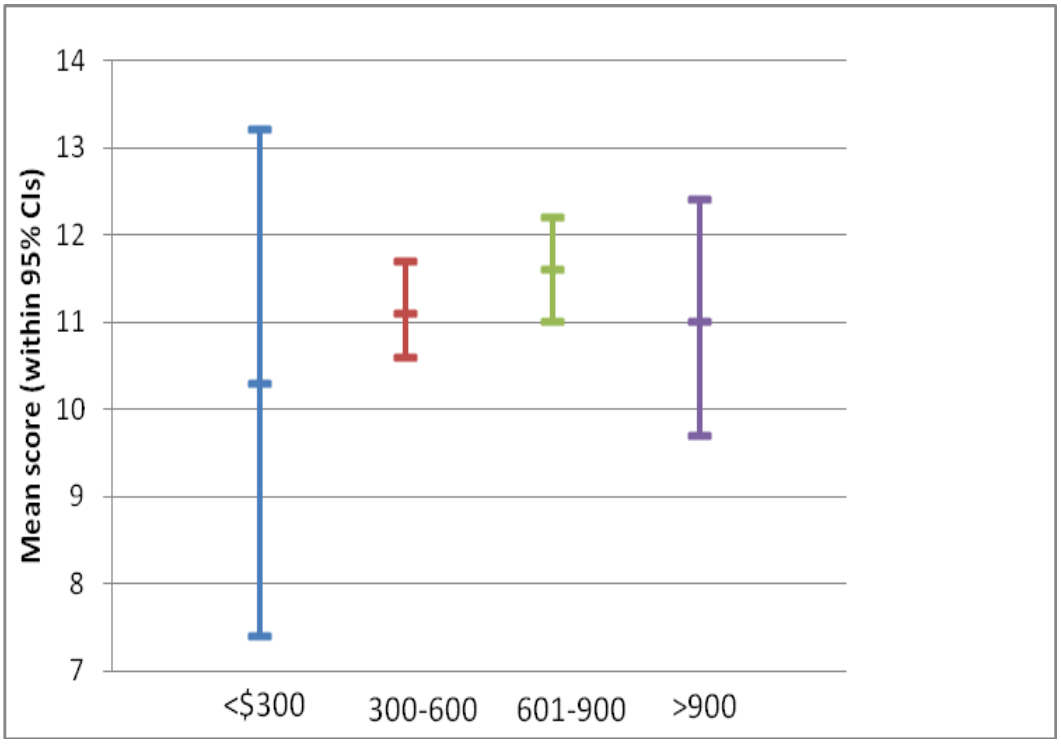


Figure 4-12 Salary: plots (with 95% CIs) for MBI-DP

4.3.3 Differences of MBI-PA due to demographic variables

Differences of PA due to gender, hospital type, extra work and night shifts

The independent sample t-test output table 4-8 shows that there is no significant difference between means of male and female in PA (P=0.222), which means that level of trauma is similar among male and female nurses. It shows that there is significant difference between means of public and private hospitals in PA (P=0.003), which means that nurses in private hospitals expressed more burnout than those in public hospitals (small effect size: 0.42). Also, it shows that there is no significant difference between means of no extra work and extra work in PA (P=0.169), which means that level of burnout is similar among nurses who work and do not work extra time. Finally, it shows significant difference between means of nurses regarding PA (P=0.002), which means that PA is higher among nurses who work more than 5 nights per month (trivial effect size: 0.19).

Table 4-8: Differences of PA due to gender, hospital type, extra work and night shifts

MBI-PA		N	Mean	SD	t value	P	Diff-means (95% CIs)	d
Gender	Male	701	31.3	9.4	-1.044	**0.297**	-0.6 (-1.7, 0.5)	
	Female	629	31.7	10.9				
Hospital type	Public	1233	30.9	10.0	-7.024	**0.000**	-7.4 (-9.4, -5.3)	**0.69**
	Private	97	38.2	8.6				
Extra work	Yes	446	31.6	10.7	0.562	**0.574**	0.3 (-0.8, 1.5)	
	No	884	31.3	9.8				
Night shifts	0-5	1013	31.8	10.0	2.037	**0.042**	1.4 (0.1, -2.7)	**0.10**
	>5	295	30.4	10.4				

Cohen's d (effect size): Trivial <0.20, Small 0.20-0.49, Medium 0.50-0.79, Large ≥0.80

Differences of PA due to age, experience, specialisation, qualifications, salary and marital status

The ANOVA output table 4-9 shows no significant differences (F=1.702, p=0.165) in age of nurses regarding the PA. It shows significant differences (F=3.502, p=0.015) in experience of nurses regarding the PA (small effect size: 0.10). Tukey test output shows statistically significant effects were located among the experience (6-10) and (>15) with mean differences 3.42, which means that reduced personal accomplishment is higher among nurses with (6-10) years of experience. It shows no significant differences (F=0.839, p=0.580) in specialisation of nurses regarding PA. It shows no significant differences (F=2.132, p=0.075) in qualification of nurses regarding the PA. It shows no significant differences (F=1.183, p=0.315) in marital status of nurses regarding the PA. All previous results are largely consistent with the picture given by the CI plots in Figure 4-13, 4-14, 4-15, 4-16, 4-17, and 4-18.

Table 4-9: Differences of PA due to age, experience, specialisation, qualifications, salary and marital status

MBI-PA		N	Mean	SD	F	P	Eta-squared (η2)
Age	19-30	726	31.5	10.3	0.068	**0.977**	
	31-40	409	31.3	10.1			
	41-50	162	31.3	9.6			
	51-60	33	31.0	8.0			
Experience	1-5	614	31.7	10.2	0.649		
	6-10	461	31.2	10.2			
	11-15	119	31.8	10.1			
	>15	136	30.6	9.5			
Specialisation	Medical	219	32.4	8.8	3.213	**0.001**	**0.021**
	Surgical	215	31.4	9.0			
	Paediatric	190	31.0	10.3			
	Operating room	100	33.0	8.8			
	Maternity	138	31.1	11.2			
	ICU	157	28.9	12.9			
	Office	99	31.7	8.5			
	Emergency	117	32.6	9.3			
	Outpatient clinics	74	29.2	11.3			
	Psychiatric	21	37.8	7.1			
Marital status	Single	275	31.3	10.1	0.048	**0.953**	
	Married	1038	31.5	10.1			
	Others (divorced/widowed)	17	31.8	10.0			
Salary in USD	<300	25	30.8	8.8	0.147	**0.932**	
	300-600	646	31.6	10.9			
	601-900	558	31.4	9.6			
	>900	101	31.0	8.5			
Qualifications	Associate diploma	512	31.6	10.6	0.591	**0.621**	
	3years diploma	101	30.4	8.5			
	Bachelor	667	31.5	9.8			
	Postgraduate	50	30.3	11.3			

η2 effect size: Trivial < 0.001, Small 0.01-0.05 Medium, 0.06-0.13, Large ≥0.14

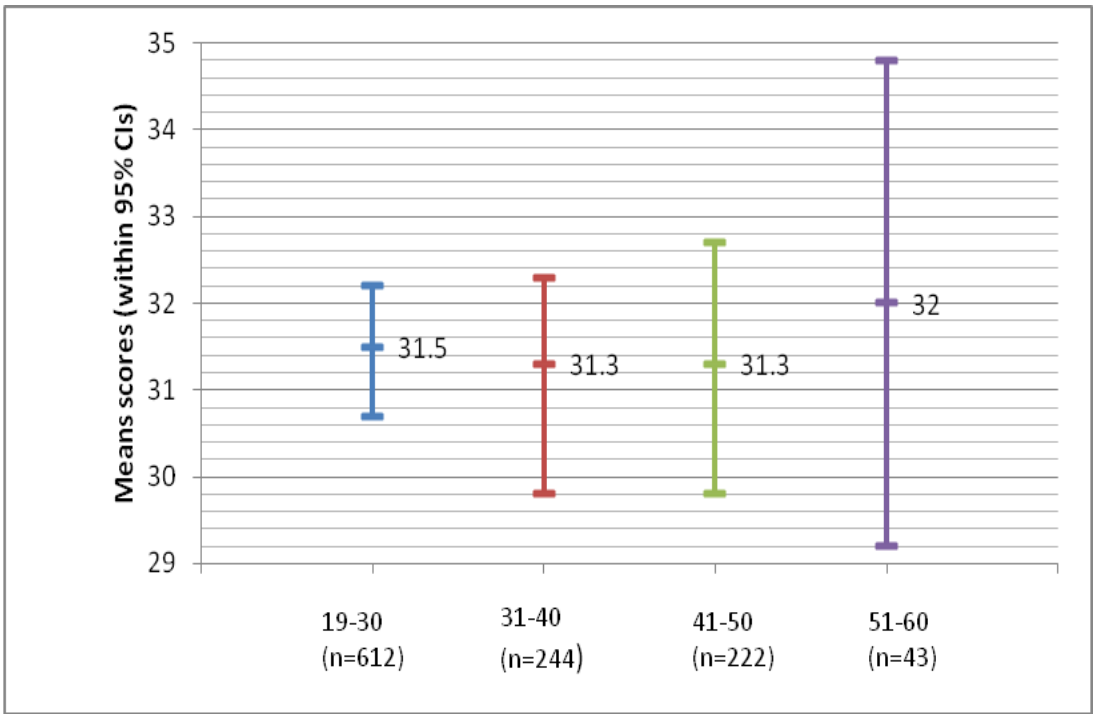


Figure 4-13 Age: plots (with 95% CIs) for MBI-PA

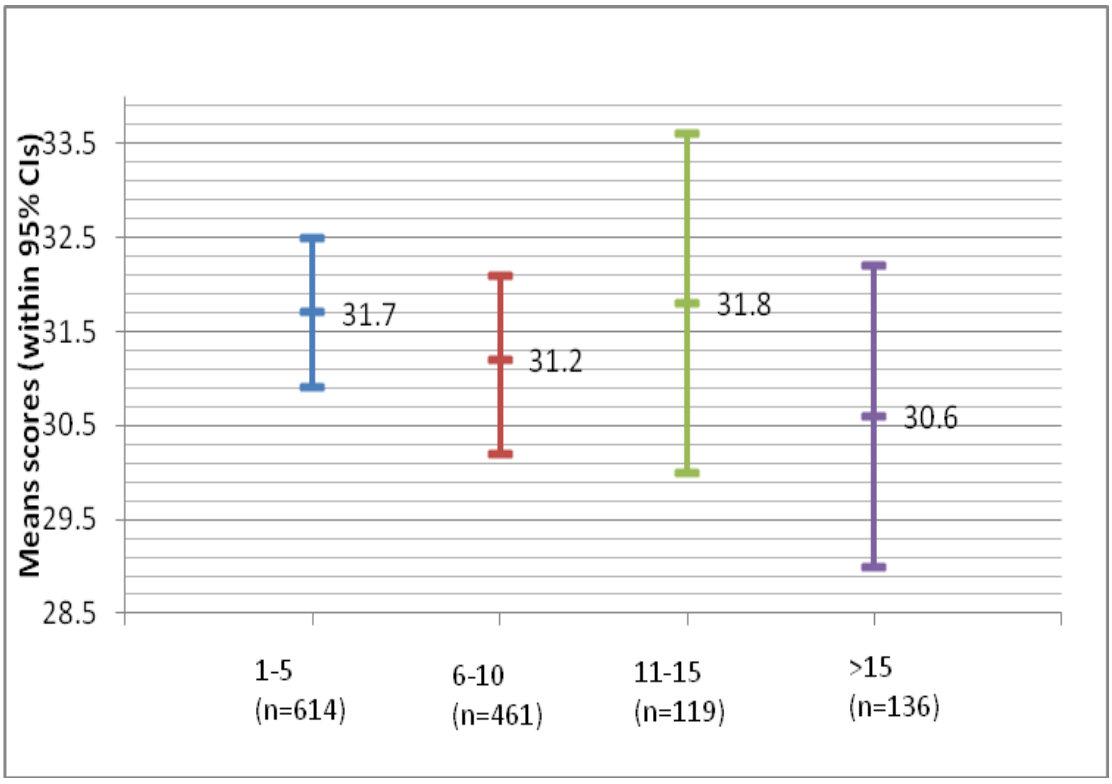


Figure 4-14 Experience: plots (with 95% CIs) for MBI-PA

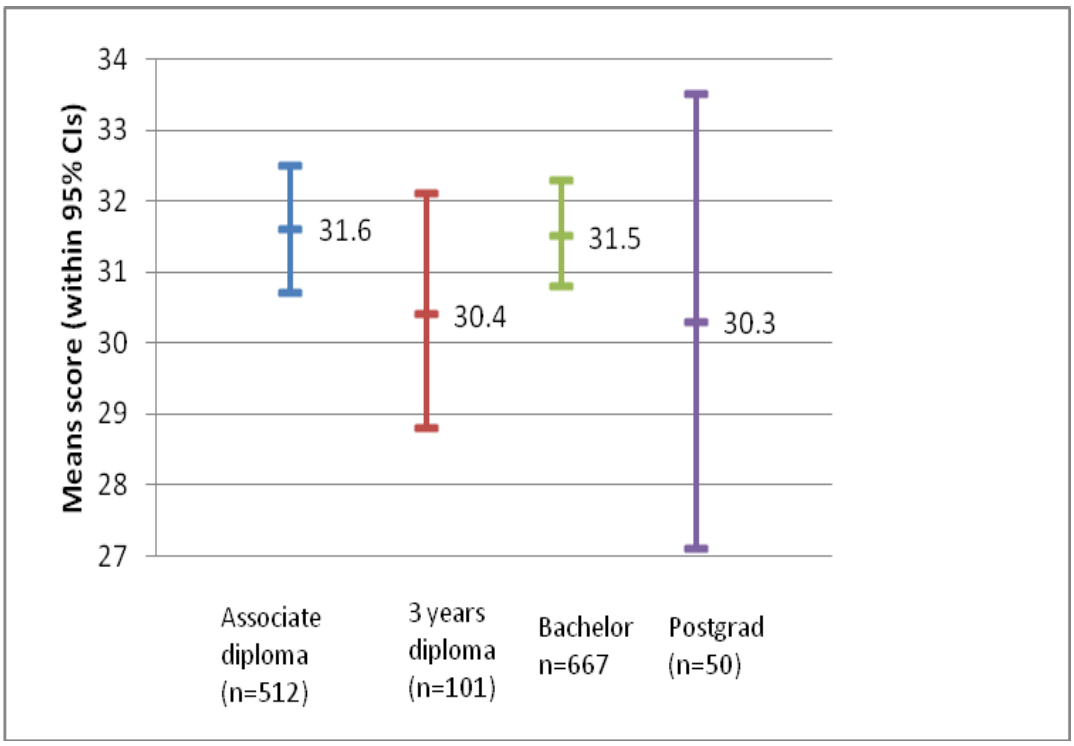


Figure 4-15 Qualification: plots (with 95% CIs) for MBI-PA

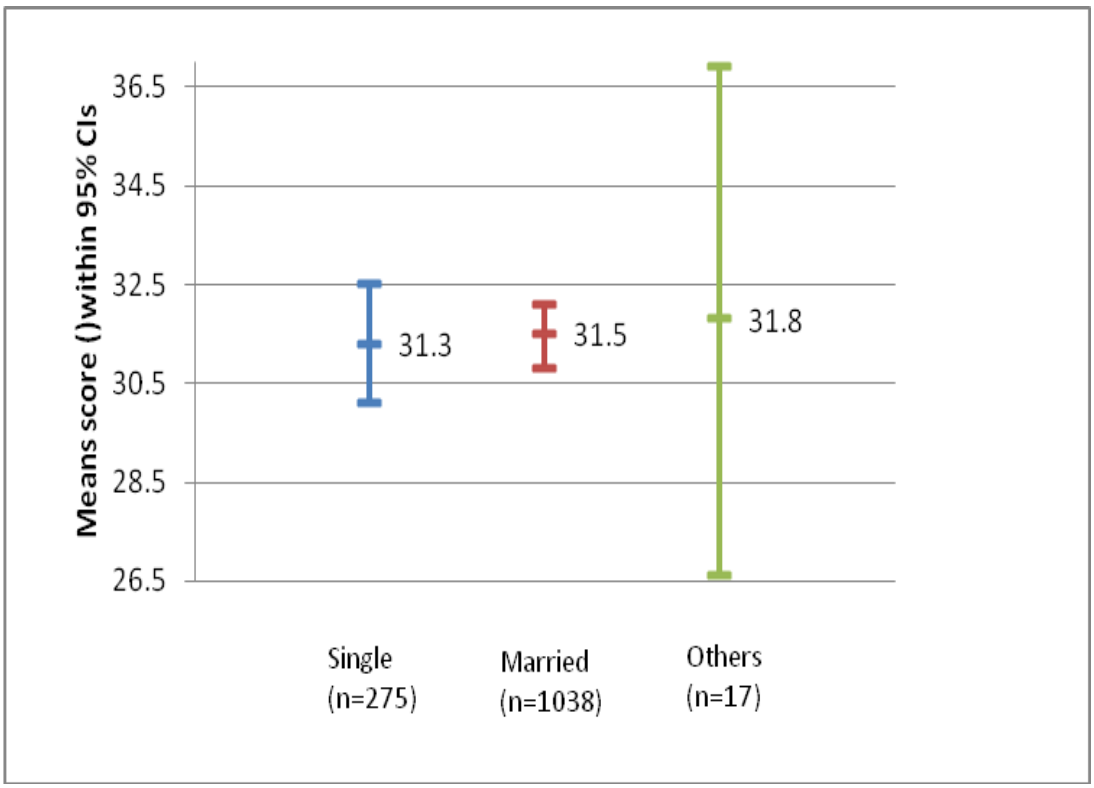


Figure 4-16 Marital status: plots (with 95% CIs) for MBI-PA

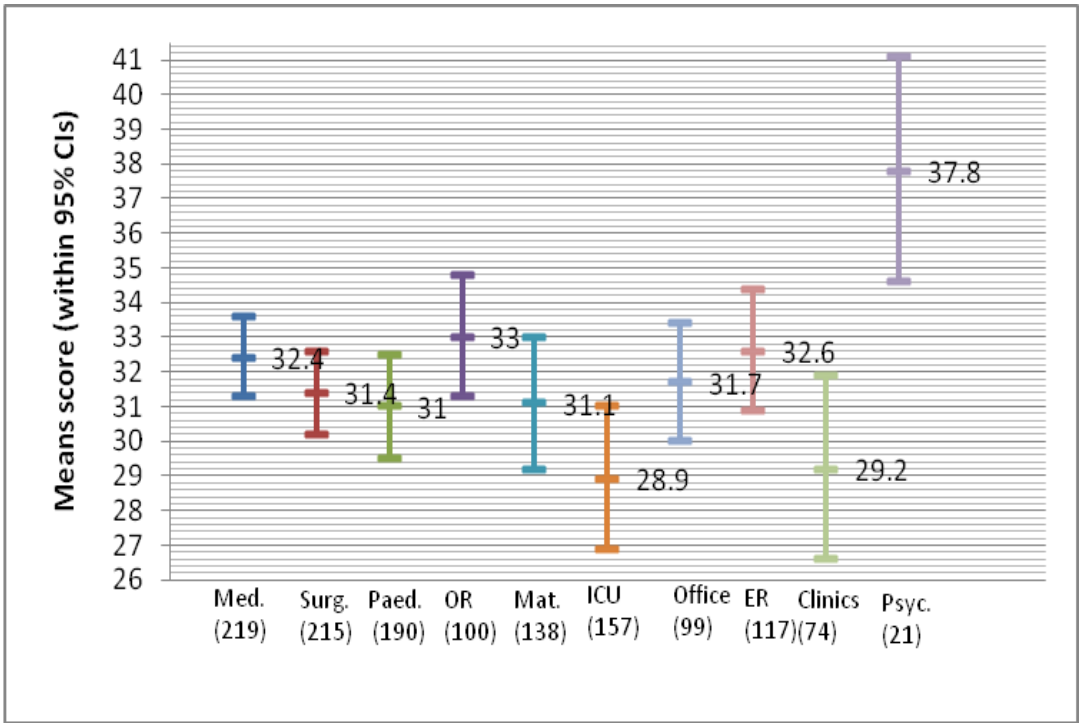


Figure 4-17 Specialisation: plots (with 95% CIs) for MBI-PA

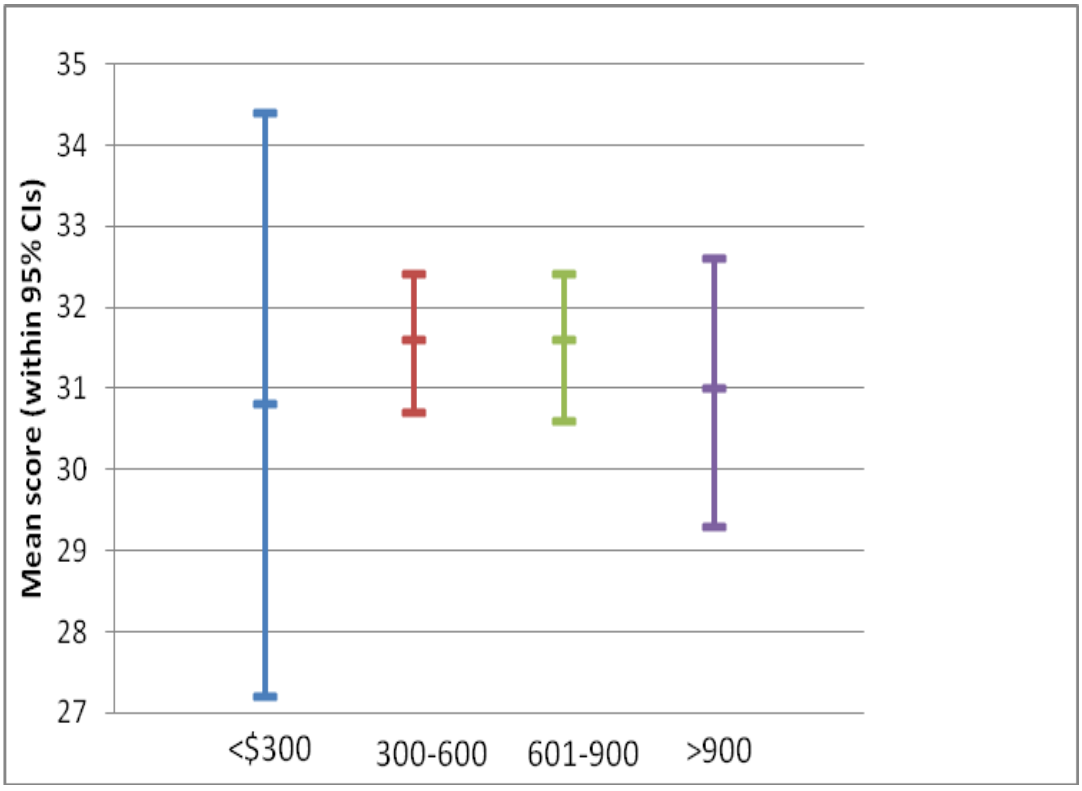


Figure 4-18 Salary: plots (with 95% CIs) for MBI-PA

CHAPTER 5

DESIGN, IMPLEMINTATION AND EFFECTIVENESS OF THE BURNOUT REDUCTION PROGRAMME (PHASE TWO)

5.1 Design of the burnout reduction programme

Burnout is costly to the individuals and to the organisation and can be extremely expensive and disruptive, so both should work closely together to deal with burnout. Based on transactional theory, burnout can be tackled on primary (prevention), secondary (timely reaction) or tertiary (rehabilitation) levels (Cox, Griffiths, Barlow, Randall, Thomson & Rial-Gonzalez, 2000).

Primary interventions attempt to eliminate the sources of stress in organisations by focusing on changing the physical or socio-political environment to match individual needs and granting them with more control over their work situation (Cooper et al, 2001). If demands or stressors remain unaltered, they will eventually result in full-blown burnout (Nelson & Quick, 2006: 228). The responsibility is on organisations to become involved in primary prevention because they alone have the power to change the demands or revised the expectations that they place on their employees. Although it is often impossible to remove some stressors, concessions can sometimes be made. Primary level interventions could be effective if communication processes are improved, jobs are redesigned or nurses have been involved in the decision-making process (Jordan, Gurr, Tinline, Giga, Faragher & Cooper, 2003), and given the authority to order the sequence of their work activities, the timing of their work schedules, and the selection of their work tools and work teams (Nelson & Quick 2006: 232). One

consideration regarding hospital nurses in Gaza could include a reduction in unnecessary workload. Another consideration could be the war and the siege against Gaza and if there was a peace, nurses would be less stressed.

Secondary interventions will help nurses in managing stress without trying to eliminate or modify workplace stressors through training programmes. These programmes help nurses to identify symptoms of burnout in themselves and others, and to improve their coping skills (Jordan et al, 2003). Burnout reduction programmes therefore focus on teaching nurses to use coping strategies that will enable them to endure the stresses of the job without harm to themselves or to deal with the source of the stress itself (Landy & Conte 2006). The purpose of secondary prevention is to alter or modify the responses of nurses to demands or stressors. If nurses can learn techniques to manage the work stressors that are integral to the jobs in which they find themselves, they will have the power to moderate the stresses and strains they experience in the work situation and to promote their own health and wellbeing by definite plans of action. Landy & Conte (2006) describe secondary strategies as emotion-focused coping strategies that seek to reduce the intensity of the emotional response to stressors. This can be achieved by avoiding, minimizing or distancing oneself from the presence or impact of the stressor, and can either be effective or ineffective. Effective coping strategies are able to deal with the problem of stress by regarding it as a challenge and by becoming able to identify the imminence of a stressor and so neutralising it before it can cause a destructive effect on the individual. The most ineffective strategies are escape and avoidance strategies because these decrease the effect of stress by denying the presence of stress or by using chemicals (drugs or alcohol) to amend the pain imposed by the stressor.

Theodoratou, Tafiadis, Mpekos & Skiloyanni (2006) examined the coping strategies used by a sample of 160 nurses working in Greece. They report that the coping strategies used by these nurses could be divided into the following categories: focus (89.4%), social support (78.8%), withdrawal (30.6%), diversion (83.8%), and denial (72.5%). It is vitally important for individuals to educate themselves in the skills they need to be able to cope with the stressors that endanger their mental and physical health. Such skills revolve around skill in self-diagnosis and self-help or self-help. As soon as a nurse feels that a situation has become unduly stressful, he/she should immediately adopt measures to cope with the stress and undermine or eliminate the negative impact that it could make on him/her. Hays, All, Mannahan, Cuaderes & Wallace (2006) studied the coping strategies that were being utilised by nurses who work in critical care units. Their findings were that the most frequently utilized strategy to cope with stress was the practice of varying forms of self-control. These same nurses also reported that they took the initiative in taking responsibility for preventing their own stress.

Tertiary prevention is concerned with bringing individuals and organisational who have developed full-blown burnout back to a condition of full health and competence.

The techniques and strategies of tertiary prevention are designed to treat and rehabilitate individuals who are already terminally stressed and burned out. Maslach & Leiter (1997) have indicated that the greater the gap or mismatch between the person and the job, the greater the likelihood of burnout and the greater the match or fit, the greater the likelihood of engagement with work.

Tertiary prevention strategies aim to help nurses who are experiencing current problems originated either from the job environment or their job lives. These programmes seek to

adapt nurses' behaviour and lifestyle without much reference to changing hospital practices (Jordan et al, 2003).

Several studies have shown that occupational stress is more likely to lead to burnout when nurses lack adequate coping skills. Garrosa et al (2010) linked active coping among 98 Spanish nurses with lower depersonalization and higher personal accomplishment, and higher levels of control and social support were linked to lower levels of emotional exhaustion. Montoro-Rodriguez & Small (2006) found that nurses who use confrontational conflict resolution styles are more likely to experience higher emotional exhaustion and depersonalization. Iglesias, Vallejo & Fuentes (2010) concluded that high scores on the Acceptance and Action Questionnaire (AAQ) among 80 critical care nurses in the Northern State of Spain were correlated with high emotional exhaustion and depersonalization scores and low personal accomplishment scores on the MBI.

A study by Lee (2003) indicated that the better use of coping ways, the less work stress experienced by nurses and the better the perceived health status. According to Lambert, Lamberta, Itanob, Inouyeb, Kimc, Kuniviktikuld, Sitthimongkole, Pongthavornkamole, Gasemgitvattanae & Itof (2004), accepting responsibility and escape-avoidance were the two coping mechanisms found to be positively correlated with the likelihood of leaving the current nursing position. Thus, nurses who indicated that they were likely to change nursing positions found that accepting responsibility and escape-avoidance were their best means of coping.

Lambert et al (2004) indicated that self-control; seeking social support; planful problem solving and positive reappraisal were found to be the four most utilised ways of coping.

This is supported by Tyson & Pongruengphant (2004) who indicated that nurses in Thailand's hospitals continue to experience high levels of stress from a lack of adequate support or opportunities to participate in making decisions directly affecting their patients. Garrosa et al (2010) found that active coping in Portuguese nurses had an inverse temporal effect on depersonalisation and lack of personal accomplishment. Gueritault-Chalvin et al (2000) indicated that both external (such as fatalistic attitudes, negative expectations and reliance on faith, prayers or miracles) and internal (such as expression of feelings and emotions, patience and time-out) coping styles significantly predicted levels of burnout among AIDS nurses in USA. Payne (2001) found that the most frequently used coping strategy in UK hospice nurses was reported to be `planful problem-solving' and the least frequently used was `escape'.

Lee & Akhtar (2007) found that self-efficacy among Hong Kong nurses appeared to be the most effective coping resource as it had significant negative effects on emotional exhaustion and depersonalization and a positive effect on personal accomplishment.

Resilience is the ability of the individual to overcome negative situations, or the effective coping when faced with loss, hardship or adversity (Tugade & Fredrickson, 2004). It is characterised by the ability to absorb high levels of disruptive change while displaying minimal dysfunctional behaviour (Werner, 2004) to undergo personal change enabling the person to thrive and survive (McGee, 2006). Everyone has the ability to develop resilience and that it results where circumstances jeopardise personal growth (Masten, 2001). Different factors that may affect one's ability to cope include social, organisational support (Ekedahl & Wengstrom, 2006; Fitch Matyas & Robinette, 2006), personal views, attitudes and circumstances (Hinds, Quargnenti, Hickey & Magnum,

1994), personal and professional experiences and resilience (Ablett & Jones, 2007). Some nurses can deal with stress effectively, while others cannot (Quattrin et al, 2006). Individuals who transcend stress are considered resilient if they can avoid burnout especially in the presence of stress (Warelow & Edward, 2007). Resilience is one of the individual and collaborative factors that mediate stress among nurses (Cunningham, 2003; Sherman, Edwards, Simonton & Mehta, 2006; Ablett & Jones, 2007), and can be either physiological or psychological mediator (Tusaie & Dyer, 2004). Resilience in Korean nurses had a negative correlation with occupational stress, and had a positive correlation with occupational satisfaction (Kim, Oh & Park, 2011). The presence of high resilience in a sample of American ICU nurses was significantly associated with a lower prevalence of burnout syndrome (Mealer, Jones, Newmana, McFann, Rothbaum & Moss, 2012). It is highly recommended that nurses should develop resilience to overcome effectively the professional obstacles they face in their work (Jackson, Firkto & Edenborough, 2007). Understanding how nurses cope and the presence of resilience among them will help providing greater support to nurses to prevent the consequences of exposure to high levels of stress and burnout (Zander, Hutton & King, 2010).

Garrosa et al (2010) found that social support was relevant predictors of burnout dimensions among Portugal nurses. High levels of support have been associated with low levels of burnout in a number of mental health nursing studies (Kilfedder et al, 2001). Brown, Prashantham & Abbott (2003) have found a negative relationship of perceived social support with emotional exhaustion and depersonalisation on a sample of human service professionals. Albar Marin & Garcia-Ramirez (2005) confirmed the role of three sources of social support (family as kin, co-workers as insiders, and supervisors as outsiders) on the emotional exhaustion in nurses at a general hospital in

Seville, Spain.

Jenkins & Elliott (2004) in their study among mental health nurses in London found that higher levels of support from co-workers were related to lower levels of emotional exhaustion and higher stressor scores were associated with higher levels of depersonalisation for staff reporting high levels of social support, but not for those reporting low levels of support (a reverse buffering effect). Demir, Ulusoy & Ulusoy (2003) found that nurses who have problems in relations with the other team members and are not satisfied with their work conditions have higher levels of burnout.

5.1.1 The framework of Medical Research Council (MRC)

The framework of Medical Research Council (MRC) in the United Kingdom was used to guide the development of the burnout intervention programme. The process is as follows: Initially one needs to establish if there is a problem and, if so, the extent of the problem and to identify potential areas for intervention. The framework has five phases. The first phase is the theoretical phase: this may be formal theory of individual or organisational behaviour or it may use informal evidence regarding organisational constraints, patient profiles or health professionals' beliefs that may promote or inhibit behavioural changes. The second phase is modelling: this involves delineating an intervention's components and how they inter-relate. The third phase is an exploratory trial: to experiment with intervention and varying the different components to see what effect each has on the intervention as a whole. The fourth phase is the main trial: to evaluate a complex intervention with a stated outcome. The first, second and third phases of MRC framework were integrated to form phase two in this study but with clear delineation between these phases. The fifth phase is long term surveillance: to

establish the long-term and real-life of effectiveness of intervention. The last phase was not applicable due to time limits.

5.1.2 The Transactional Theory of Stress and Coping

The Transactional Theory of Stress and Coping developed by Lazarus & Folkman (1984) was used as the theoretical framework for this study. This model emphasizes the reciprocal interaction between the person and the environment (Zedeck, 2009). According to this theory, stress is located in the relationship between the environment, persons' appraisals of the environment, and on-going attempts to cope with issues that arise (Cooper, Dewe & O'Driscoll, 2001). Based on this, stress is not located in the person or the environment separately.

Two processes have identified the interaction between the person and the environment. The first process which is called 'cognitive appraisal', evaluates the relevance and the impact of a particular encounter with the environment to the well-being of the person. This involves evaluation of potential stressors as posing some kind of threat to the individual. Cognitive appraisal is purported to play an important role in the coping process. As the environment is always changing, persons perceive different stressful situations in different manners. Accordingly, they vary their use of coping strategies across stressful situations. This means that flexible stress evaluation facilitates flexible coping responses (Cheng & Cheung, 2005).

The second process is called 'coping' which manages particular external and internal needs that are evaluated as challenging or exceeding one's resources by altering cognitive and behavioural efforts (Lazarus & Folkman, 1984: 141). This involves the

evaluation of coping resources and alternative responses. If a person perceives that a situation is threatening, but has the capability to cope with it, then distress is not experienced and this situation is perceived as challenging (Zedeck, 2009).

In the model, coping is seen as a fundamental process on how persons interact with the environment and is an ongoing, growing process that occurs within the line of altering persons and situational demands (Cheng & Cheung, 2005). Similarly, Folkman & Moskowitz (2004) have defined coping as the thoughts and behaviours used by persons to manage both the external and internal demands of conditions that are evaluated as stressful. Wilhelm, Roy, Mitchell, Brownhill & Parker (2002) found that some persons tend to vary their ways of coping in different situations, whereas others tend to use the same ways regardless of situational features.

A distinction is commonly made between problem focused coping, which seeks to solve the demands of a stressor, and emotion focused coping, which helps the individual to feel better about the stressor (Cooper et al, 2001). Distress arises when a person evaluates the demands of a specific situation as about to exceed available resources and to be a threat his/her well-being, requiring a change in individual functioning to return balance (Lazarus, 1966).

Fickova (2002) reported that affectivity (positive and negative emotions) determines which coping strategy to be used at the time of the stressful situation. If emotions were intensive, they change the nature of the information-processing approach and hint to the person that something is wrong (Boekaerts, 2002), and if emotions were of low intensity, they signal that everything is fine (Fredrickson, 2001).

Folkman & Lazarus (1991) summarised the process in this model. A potentially stressful event will produce the primary appraisal process in which a person evaluates the extent of threat in relation to his/her wellbeing. When an event is perceived as threatening or a challenge, the secondary appraisal process provides a global evaluation of the individual's coping resources and ability to manage the threat/challenge. Coping responses start after the cognitive appraisals and the stress outcomes of this potentially stressful event are based on the effectiveness of one's cognitive appraisals and coping processes. The stress results will then feed back to the cognitive appraisal stages for more actions if required.

This theory has been chosen as the most appropriate for this study because of its flexibility (Ross & Altmaier, 1994) and because it accords with the psychological enquiry about beliefs, views and practices related to stress and burnout among nurses. Furthermore, this model has several strengths; it explains coping in steps, underscores the importance of thinking, perception, and determination of controllability, emphasizes the role of chronic stressors or daily hassles as being more important than once-in-a-while life events; tracks into account the interaction between individual and environment; and has a feedback mechanism in the form of appraisal (Sharma & Romas, 2012). Figure 5-1 summarises how Transaction Model of Stress and Coping was used in this study.

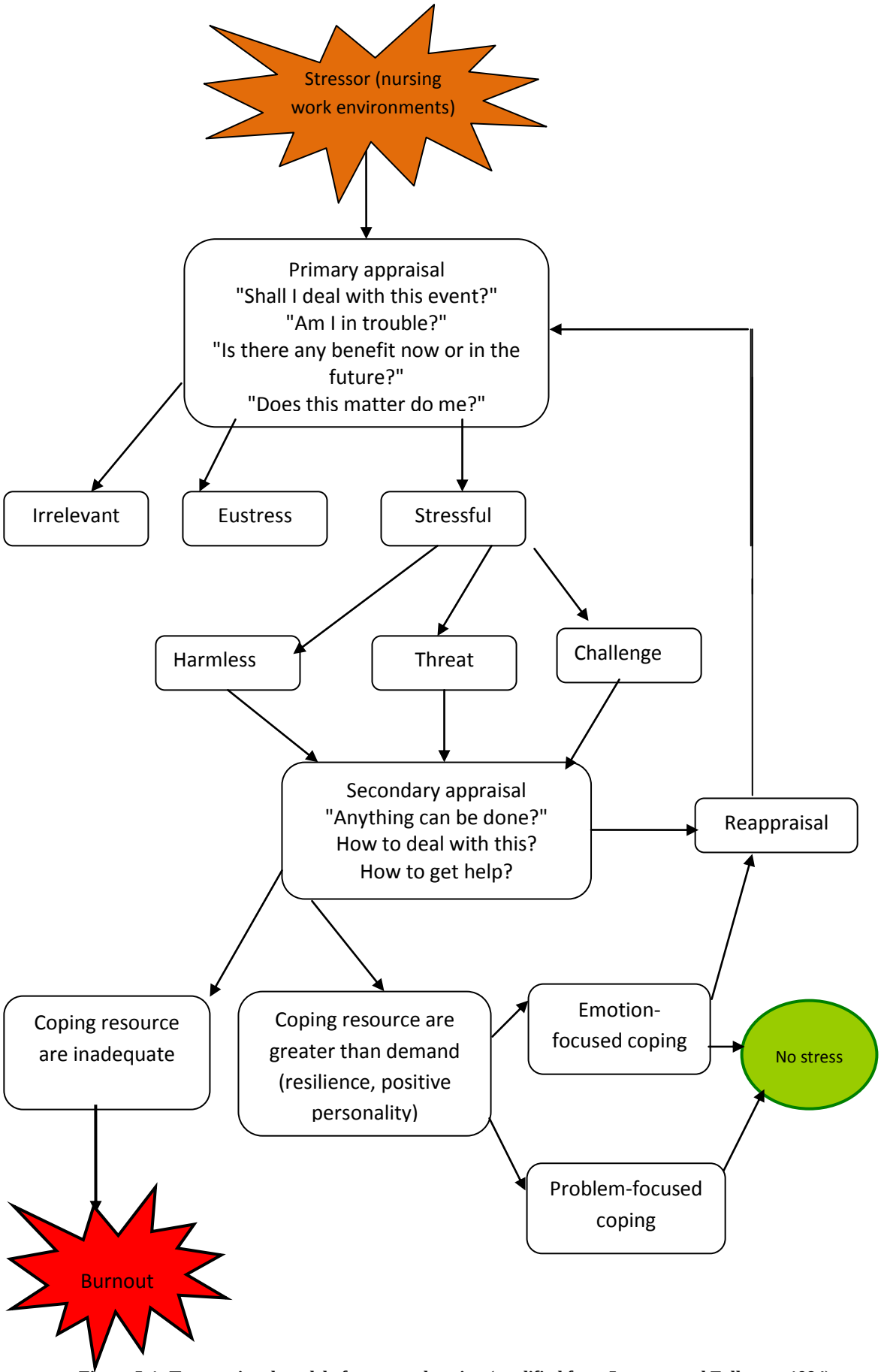


Figure 5-1: Transactional model of stress and coping (modified from Lazarus and Folkman, 1984)

5.2 Components of the burnout reduction programme

The levels of burnout were high among Gaza nurses, which indicated the need for burnout reduction programmes. As getting nurses to participate in the current complex intervention programme, an MRC approach (MRC, 2008) was used. Findings of this study will help us to establish the most important variables to be tested as part of a Randomised Controlled Trial of a complex intervention.

Each group consists of 15 participants characterised by specific level of burnout (high, moderate, and low) as measured by MBI in the first part of study.

For phase two of the study and on the light of data analysis of phase one of the study, 90 participants were chosen randomly from the different three levels of burnout (high, moderate, and low) as measured by MBI in phase one of the study. Thirty participants represented each level of burnout (15 interventions and 15 controls) and the burnout reduction programme was conducted in 3 intervention groups. Jacobs, Masson & Harville (2002) indicated that the ideal size for counselling groups is eight members or less, while Gladding (1994) indicated 8 to 12 to allow members an opportunity to express themselves without forming into subgroups. The statistician attached to the Faculty of Nursing in the Islamic university of Gaza advised that 15 in each sub-group would be adequate for representativeness and analysis. If up to 5 participants withdrew, the programme would be implemented with the remaining 10 participants. For a purpose of carrying out the intervention programme, a suitable hall was provided by an institution in Gaza.

For each intervention group, the burnout reduction programme consisted of 9 sessions (1 session weekly) and each session lasted approximately 2 hours. Interventions were

applied in a quiet and comfortable room in one of Gaza hospitals. The nurses were served food and drink, and friendly environment was created. Interventions were applied by the researcher, and supervised by site supervisor who had previously managed intervention programmes to different target groups. Attendance of participants were facilitated by Nursing Unit through allowing nurses who were working on daytime to attend during working hours and if nurses were off, the attendance time will be considered as work hours. They were paid for 4 hours for each session; 2 hours for attendance plus 2 hours for travel.

The intervention programme aimed to reduce the level of burnout among hospital nurses, increase their abilities to cope with stress they are exposed to and to correct irrational thoughts that accompanied with emotional and behavioural disturbances to rational thoughts and beliefs lead to better coping strategies.

In implementing this burnout reduction programme, different techniques were used such as: discussion, feedback, reflection, simple homework, simple lecture, giving examples, open discussion, self-expression, persuasion, role play and socio-drama.

In the first session, the intervention programme was identified including introduction, nature of programme, expectation of participants (differentiation between correct and false expectations), principles and regulations for the programme, working as team, agreement of the number of sessions and the appropriate time for sessions.

In the second session, the concepts of stress and burnout were explained to the nurses (meaning of being a nurses, stress that nurses encounter, effect of stress and burnout (bio-psychosocial and spiritual) based on Stress and Coping Model. As expressed by

participants, workload and dealing with deaths and dying patients were the main sources of stress among them.

In the third session, the concepts of self-awareness including self-concept, self-esteem, resilience and self-confidence and their relationships with stress and burnout were discussed.

In the fourth session, cognitive problems found among nurses and methods for coping with these problems were described.

In the fifth session, the concepts of coping methods, basic communication skills and time management were discussed. Cognitive coping strategies and the problem-solving method were used for coping training. Both problem-focused coping methods directed to alter the situation and emotion-focused coping methods directed to alter the emotional and cognitive reactions to the situation were integrated in this session.

In the sixth session, stressful situations that the nurses encounter in the hospital were discussed and resolved by utilising the skills learned during the course of the programme particularly the problem-solving method.

In the seventh session, using of personal skills to deal effectively with people and environment and how to solve problems and minimise conflicts with other hospital workers, mainly nurses and doctors, was confirmed. Several examples were considered in the way of seeking support from others.

In the eighth session, the importance of sports exercise, deep breathing and relaxation was stressed and practical relaxation technique was performed.

In the ninth session (the final session), a quick review was conducted to make sure that participants understood the concepts of last sessions and situational quizzes were given. At the end of the last session, a small party was carried out followed by application of MBI as post intervention. MBI was applied also to the three control groups. Table 5-1 summarises the content of the burnout intervention programme.

Table 5-1: Contents of the burnout reduction programme

Session	Content
1	Identifying the programme (introduction, nature of programme, principle and regulations, agreement of sessions' number and time)
2	Discussing the concepts of stress and burnout and how they are developed according to Stress and Coping Model
3	Explaining of self-awareness self-concept, self-esteem, resilience and self confidence
4	Describing cognitive problems found among nurses and methods for coping with these problems
5	Discussing the concepts of coping methods, basic communication skills and time management
6	Explaining the stressful situations that the nurses encounter in the hospital and how to resolve them by utilising the skills learned in the programme
7	Use of personal skills to deal effectively with people and environment and how to solve problems and minimise conflicts with other hospital workers mainly nurses and doctors
8	Performing a practical relaxation technique with instructing nurses to the importance of sports exercise, deep breathing and relaxation
9	Reviewing quickly what had been undertaken in the last sessions. A small party was carried out followed by application of MBI as post intervention

The control groups did not receive either intervention until after the final data collection. The control group completed the questionnaires prior to and just after the intervention like the intervention groups.

After completing the intervention programme: the same survey was applied to both groups directly after completion of the intervention programme, followed by analysis using the Mann Whitney test which indicates whether the intervention programme was effective (depending on the difference of burnout level in both groups). When using the Mann Whitney test, two results were considered: the levels of burnout in the experimental group pre and post intervention programme, and also the level of burnout in the control group and experimental group to exclude the effect of other factors on the level of burnout. This was applied on the three different (intervention) and (control) groups of the different levels of burnout (mild, moderate and severe).

As significant improvement was evident in the experimental group post intervention (average and high levels of burnout), the same intervention was offered to the participants in the control group (average and high level of burnout).

Before starting the intervention programme, Mann Whitney U-test was used to ensure that no significant differences in burnout level were between the (intervention) and (control) groups. After intervention, Mann Whitney test was used to assess the effectiveness of intervention programme by calculating the differences between intervention and control groups and between intervention groups before and after intervention. The Mann Whitney U-test was recommended because the data is ordinal and the number of participants in each group was less than 20 (Long, Bergeron, Doyle & Gordon, 2005).

5.3 Effectiveness of the burnout reduction programme

When results of the first part of study were obtained, three main groups were formed according to their level of burnout. Thirty participants of each group were chosen randomly, then divided into 2 groups; 15 participants in each one. Man Whitney U test was used to compare between samples. Table 5-2 shows no significant differences before intervention between intervention and control groups in the three levels of burnout before starting the programme.

Table 5-2: Differences in levels of burnout among 'interventions' and 'controls' before the programme

Dimension	Group	N	Mean rank	Sum of ranks	U	P
First group (High level of burnout)						
High EE	Intervention (1)	15	17.87	268	77	0.138
	Control (1)	15	13.13	197		
High DP	Intervention (1)	15	17.27	259	86	0.258
	Control (1)	15	13.73	206		
Low PA	Intervention (1)	15	16.57	248.5	96.5	0.499
	Control (1)	15	14.43	216.5		
Second group (Average level of burnout)						
Average EE	Intervention (2)	15	16.30	244.5	100	0.614
	Control (2)	15	14.60	220.5		
Average DP	Intervention (2)	15	17.00	255	90	0.331
	Control (2)	15	14.00	210		
Average PA	Intervention (2)	15	18.10	271.5	73	0.091
	Control (2)	15	12.90	193.5		
Third group (Low level of burnout)						
Low EE	Intervention (3)	15	16.27	244	101	0.626
	Control (3)	15	14.73	221		
Low DP	Intervention (3)	15	17.43	261.5	83	0.185
	Control (3)	15	13.57	203.5		
High PA	Intervention (3)	15	17.43	261.5	83.5	0.185
	Control (3)	15	13.57	203.5		

***(1) = High burnout, (2) = Average level of burnout, (3) = Low level of burnout**

Table 5-3 shows that burnout levels reduced significantly in intervention groups after the reduction programme compared with control groups.

Table 5-3: Differences in levels of burnout among 'interventions' and 'controls' after the programme

Dimension	Group	N	Mean rank	Sum of ranks	U	P
First group (High level of burnout)						
High EE	Intervention (1)	15	22.9	343.5		
	Control (1)	15	8.10	121.5	1.5	**0.000**
High DP	Intervention (1)	15	10	150		
	Control (1)	15	21	315	30	**0.001**
Low PA	Intervention (1)	15	22.4	336		
	Control (1)	15	8.6	129	9	**0.000**
Second group (Average level of burnout)						
Average EE	Intervention (2)	15	11.63	174.5		
	Control (2)	15	19.37	29.5	54.5	**0.016**
Average DP	Intervention (2)	15	12.2	183		
	Control (2)	15	18.8	282	63	**0.032**
Average PA	Intervention (2)	15	20.53	308		
	Control (2)	15	10.47	157	37	**0.002**
Third group (Low level of burnout)						
Low EE	Intervention (3)	15	15.83	237		
	Control (3)	15	15.17	227	107.5	0.833
Low DP	Intervention (3)	15	17.4	261		
	Control (3)	15	13.6	204	84	0.197
High PA	Intervention (3)	15	16.93	254		
	Control (3)	15	14.07	211	91	0.364

***(1) = High burnout, (2) = Average level of burnout, (3) = Low level of burnout**

Table 5-4 shows that burnout levels reduced significantly in intervention groups after the reduction programme compared with before the programme.

Table 5-4: Differences in levels of burnout among 'interventions' before and after the programme

Dimension	Group	N	Mean rank	Sum of ranks	U	P
First group (High level of burnout)						
High EE	Intervention before (1)	15	22.9	343.5	1.5	**0.000**
	Intervention after (1)	15	8.10	121.5		
High DP	Intervention before (1)	15	22.93	344	1	**0.000**
	Intervention after (1)	15	8.07	121		
Low PA	Intervention before (1)	15	8	120	0.0	**0.000**
	Intervention after (1)	15	23	345		
Second group (Average level of burnout)						
Average EE	Intervention before (2)	15	19.87	298	47	**0.006**
	Intervention after (2)	15	11.13	176		
Average DP	Intervention before (2)	15	18.57	278.5	66.5	**0.050**
	Intervention after (2)	15	12.43	186.5		
Average PA	Intervention before (2)	15	10.33	155	35	**0.001**
	Intervention after (2)	15	20.67	310		
Third group (Low level of burnout)						
Low EE	Intervention before (3)	15	15.97	239.5	105.5	0.765
	Intervention after (3)	15	15.03	225.5		
Low DP	Intervention before (3)	15	16.23	243.5	101.5	0.614
	Intervention after (3)	15	14.77	221.5		
High PA	Intervention before (3)	15	14.73	221	101	0.624
	Intervention after (3)	15	16.27	244		

***(1) = High burnout, (2) = Average level of burnout, (3) = Low level of burnout**

CHAPTER 6

DISCUSSION

6.1 Introduction

In the first part of this study, prevalence of burnout experienced by the hospital nurses in Gaza Strip was explored. In addition, it sets out to assess the relationship between burnout and other variables among the hospital nurses in different departments. Data were obtained using a standard questionnaire (MBI). This chapter presents a discussion of the major findings of this study highlighting the prevalence of burnout among hospital nurses in Gaza. In the second part, the burnout reduction programme was conducted to three 'intervention' groups and effectiveness of this programme was assessed by applying the same questionnaire as post intervention.

6.2 Sample demographics

6.2.1 Response rate

The study population in this study is the entire cohort of nurses who are working in 16 hospitals in Gaza (1801 nurse). Of this population, only 1500 were able to receive questionnaire packs of which 1330 were completed and returned, a response rate of almost 88.7%. The satisfactory response rate was probably a result of the suitability of the study design, the nurses' interest in the topic (Coomber, Todd, Park, Baxter, Firth-Cozens & Shore, 2002) and handing over a questionnaire pack in person (Pryjmachuk & Richards, 2007). It compares favourably with previous studies (Abushaikha & Saca-

Hazboon, 2009; Hamaideh, 2011; Onder & Basim, 2008) which had response rates between 60 and 82%. The high response rate in this study gives us confidence that the data are representative of the nurse body as whole.

6.2.2 Gender

Of 1330 nurses responded to this study, 629 (47.3%) were female and 701 (52.7%) were male in the total sample. It is very interesting that, in Gaza, male hospital nurses are more frequently employed than female nurses, which is completely different from many countries. For example, male nurses comprise more than 55% of registered nurses in Gaza (Palestinian Nursing Association, 2007), less than 1% in China (Tian, Yan & Liu, 2009) and Taiwan (Hsu et al, 2010), 6.6% in the United States (U.S. Department of Health and Human Services Health Resources and Services Administration, 2010). Nursing is considered a female occupation in Egypt (Rashdan, 2007). When comparing with other studies, it has been found that female nurses were 73.7% in study by (Abushaikha & Saca-Hazboon, 2009), 71% in Zani & Pietrantoni (2001) and 91.8% in Yunus et al (2009).

6.2.3 Age

Age varied between 19 to 60 years old and the mean age was 31.78 years (standard deviation 7.66). Nurses aged 19-30 years were 726 (54.6%), 31-40 years were 409 (30.8%), 41-50 years were 162 (12.2%) and 51-60 years were 33 (2.5%). This indicates that nursing community in Gaza is young. When comparing with other studies it has been found that nurses younger than 30 years were 72 (47.3%), and more than 40 years were 20 (13.1%) in Abushaikha & Saca-Hazboon (2009), about 54% were 31-40 years

old, 11% were 20-30 and 35% 41-60 in Zani & Pietrantoni (2001), and 22-25 years were 9.3%, 26-30 years were 43.9%, 30-40 years were 24.1%, and 40 and above were 22.7% in Yunus et al (2009).

6.2.4 Experience

Regarding experience, 614 (46.2%) had experience of less than 6 years, 461 (34.7%) had 6-10 years, 119 (8.9%) had 11-15 years and 136 (10.2%) had more than 15 years. When comparing with other studies it has been found that nurses with 1-5 years were 28.0%, 6-10 years were 29.2%, 11-15 years were 15.3%, 16-20 years were 11.9%, and 21 and above were 15.7% in Yunus et al (2009), and <10 years were 244 (33.8%), 10-20 were 285 (39.4%), >20 were 194 (26.8%) and >25 were 1 (0.6%) in Koivula et al (2000).

6.2.5 Specialisation

Direct care nurses were represented by 92.6% of the total nurses while managers were represented by 7.4%. All departments of hospitals were included in this study but for study purpose some departments were integrated in other departments to reduce the total number of departments from 15 to 10.

6.2.6 Public and private hospitals

Only 97 (7.3%) nurses who participated in this study were from private hospitals and 1233 (92.7%) were from public hospitals. This could be because one private hospital

could not be reached for safety reason and another one was affected seriously during the last war and was not renovated completely when the study was conducted.

6.2.7 Marital status

Regarding marital status of participants, 1038 (78.0%) were married, 275 (20.7%) single and 17 (1.3%) divorced/widowed. According to (Palestinian Nursing Association, 2007), 23% of registered nurses are single, 75% married and 2% divorced or widowed/er. When comparing with other studies it has been found that 94 (61.8%) were married, 56 (36.8%) were single and 2 (1.3) were divorced in Abushaikha & Saca-Hazboon (2009), about 82% were married in Zani & Pietrantoni (2001) and 27.8% were single and 69.1% were married and 3.2 were widowed in Yunus et al (2009).

6.2.8 Night shifts

Working 5 or less night shifts was reported by 1013 (51.7%) participants, while 295 (22.2%) of nurses work more than 5 nights per month. It is common in Gaza hospitals to let young nurses work more nights per month and to reduce the number to the minimum for older nurses and female nurses with children.

6.2.9 Qualifications

Only 50 (3.8%) had postgraduate degrees (higher diploma or Master degree), 667 (50.2%) bachelor degree, 101 (7.6%) 3 years diploma and 512 (38.5%) associate degree. In Gaza, about 50% of nurses working in hospitals have bachelor degree in

nursing (Palestinian Nursing Association, 2007), while this percentage drops to 4% in Egypt (Amr, El-Gilany, El-Moafee, Salama & Jimenez, 2011).

6.2.10 Extra work

It is found that 884 (66.5%) of the participants do not work extra time, while 446 (33.5%) work extra time in other hospitals, private clinics and university as clinical instructors. This is mostly related to the fact that nurses do not like to work extra hours because the Ministry of Health does not give the exact value of the hours the nurse works as extra. For instance, if a nurse works 40 hours extra in the month, he will receive money only for 10 hours. So, the nurse is lucky if he finds overtime in areas not in governmental hospitals.

6.2.11 Monthly salary

Finally, it has been found that more than half of nurses receive monthly salary less than $600. Only 101 (7.6%) receive monthly salary more than $900. This could explain the need to improve the income of nurses in Gaza.

6.3 Prevalence of burnout among hospital nurses

Palestinian hospital nurses reported high levels of emotional exhaustion (44.9%), high levels of depersonalisation (53.6%) and low personal accomplishment (58.4%) as identified by the MBI in the present study. The high prevalence of burnout in the present study could possibly be explained in terms of the warning given by Maslach et al (2001) when they caution researchers to bear in mind that the noticeable national

differences in levels of burnout could be attributed to factors such as culture, individual responses to self-reporting questionnaires and the way in which respondents are conditioned by their local culture to assess their personal achievements in different societies and cultures. Also, this could be related to lack of control in hospitals and unfamiliar situations (Hall & Kiesners, 2005; Michie, 2002) especially under harsh social and political circumstances that Palestinian nurses live in. Al-Doski & Aziz (2010) indicated that social, economic and political circumstances in the Middle East can easily contribute to burnout among all health care professionals.

It is notable that these results are worse than most of the findings that had been reported by nurses in studies carried out in some countries. Yunus et al (2009) found that 40% of nurses in Malaysia had high levels of burnout. Vahey et al (2004) reported that more than 40% of nurses in the United States score in the high range for burnout. Kiekkas et al (2010) found 38.3% of Greek hospitals nurses had high EE, 35.0% had high DP, and 53.3% had low PA. Ostacoli et al (2010) indicated that 37.1% of nurses in Italy had high EE, 27.8% had high DP and 48.1% had low PA. Quattrin et al (2006) found that 35% of Italian nurses had a high level of emotional exhaustion, 17% had a high level of depersonalisation, and 11% had a high level of personal accomplishment. Ksiazek et al (2011) found that intensity of burnout among nurses working in Poland was 26.43% among oncology nurses and 24.46% among surgical ones. Edwards et al (2006) indicated that levels of burnout among nurses in Wales was high levels of emotional exhaustion for 36%, high levels of depersonalisation for 12% and low levels of personal accomplishment for 10% of them. Faller et al (2011) concluded that the level of burnout was 19.8% among nurses working in California, USA. Erickson & Grove (2007) indicated that the level of burnout among nurses in Midwestern city, USA was

38.4%. Poghosyan et al (2010) found that 22.5% of nurses in Canada had high EE, 6.2% had DP, and 37.4% had low PA.

Franco et al (2011) found that 17.2% of nurses in Brazil showed high rates in EE and DP; 18.8% showed impaired commitment in PA. Moreira et al (2009) found that 35.7% of nurses had burnout. Jodas & Haddad (2009) found that 8.2% of nurses had high level of burnout, 54.1% had medium level of burnout and only 37.7% of participants had a low level for burnout. Kitze & Rodrigues (2008) showed that 28.6% of nurses in the city of Sao Paulo, Brazil presented high scores in emotional exhaustion; 28.6% in depersonalisation and 19.1% in lack of personal accomplishment. Palmer-Morales et al (2007) indicated that the prevalence of high burnout among Mexican nurses was 6.79%. Tapia-Hernandez et al (2009) found that 19.8% Mexican nurses had medium level of burnout and 8.5% had high levels. Findings of Silvia et al (2005) showed that 40% of Mexican hospital nurses are emotionally exhausted, 32% undergo depersonalisation. Tuesca-Molina et al (2006) indicated that the prevalence of burnout among nurses in Colombia was as low as 15.5% nurses reporting high EE, 16.5% high DP and 9.7% diminished personal accomplishment.

The findings of (Pinikahana & Happell, 2004) study indicated that 11% of Australian nurses recorded a high level of burnout. Girgis et al (2009) found high levels of emotional exhaustion in 32.8%. Poghosyan et al (2010) found that 22.2% of nurses in New Zealand had high EE, 6.0% had DP, and 38.2% had low PA. In a study undertaken in the Mathari Psychiatric Hospital in Kenya, 38% of the respondents returned a high EE score, 47.8% returned a high DP score and 38.6% were situated in the low range of

PA (Ndetei et al, 2008). Research into the condition of health workers in Zambia showed that 62% of the health workers were experiencing moderate-to-high levels of emotional exhaustion, but none of them were experiencing depersonalisation and most of them reported a sense of personal accomplishment (Dieleman et al, 2007).

Abushaikha & Saca-Hazboun (2009) showed that Palestinian nurses in the West Bank reported moderate levels of emotional exhaustion (38.8%), low levels of depersonalisation (72.4%) and low levels of personal accomplishment (39.5%). In a study of Hungarian ICU nurses, only 9.4% were suffering from burnout (Palfine 2008). A study by Verdon, Merlani, Perneger & Ricou (2008) of nurses working in the surgical unit showed that 28% of respondents showed a high level of burnout, 37% a median level of burnout, and 35% revealed a low level of burnout.

In a study undertaken in Colombia, the prevalence of burnout among nurses was as low as 1.9%, with 15.5% nurses reporting high EE, 16.5% high DP and 9.7% diminished personal accomplishment (Tuesca-Molina et al, 2006). In Brazilian nurses, the averages for the MBI were 19.07 for emotional exhaustion, 4.18 for depersonalisation and 39.60 for personal accomplishment. In another Brazilian study into nurses, 26.4% of respondents presented with high scores on EE, 17.2% with DP, and 10.5% with a diminished sense of PA in their work (Benevides-Pereira & Das Neves Alves, 2007). Grau et al (2007) found that the prevalence of burnout among nurses in Spain, Argentina and Uruguay was 14.9%, 14.4%, 7.9% respectively. Grau et al (2007) found that burnout rate among nurses in Peru, Colombia, Uruguay, Guatemala and El Salvador was between 2.5% and 5.9%. Lin et al (2009) found that burnout among nurses from Beijing, China was moderate (EE=22.75, DP=4.17, PA=33.90). McAuliffe et al (2009)

found out that 31% of mid-level care providers in Malawi had high levels of emotional exhaustion and 27% in low levels of personal accomplishment. In the study by Ndetei et al (2008), 38% of 285 staff in Kenya reported high EE, 47.8% high DP and 38.6% low PA.

These results are comparable to the results obtained in other studies that were carried out in other countries. Results of Al-Turki et al (2010) showed that 45% of 198 multinational nurses working in Saudi Arabia had high EE, 42% had high DP, and 71.5% had moderate to low PA. In another study conducted in Saudi Arabia, Al-Turki (2010) found that 45.9% had high EE among 60 female Saudi nurses and 48.6% had high DP. Kanai-Pak (2007) found that burnout among nurses in Japan and US was 56%, 43% respectively. Aiken et al (2001) found that burnout among nurses in Canada was 43.2%. Ashtari et al (2009) showed that 45.6% of Iranian staff (including nurses) had job burnout at a high level (EE=42.5%, DP=65.5%, and low PA=21.0%). Kalemoglu & Keskin (2002) showed that 45.3% of emergency personnel in Turkey had high levels of EE, 32.0% of DP and 28.1% on low PA. Onder & Basim (2008) found that 14.5% had high burnout, 34.7% had moderate burnout, and 50.8% low burnout among Turkish nurses.

Few studies showed higher levels of burnout in one or more dimensions. Dong-mian et al (2010) found that 65% of nurses in China had burnout. Imai et al (2004) found that prevalence of burnout was 59.2% in Japanese nurses. A study by Lee et al (2003) showed that 50% of Korean nurses experienced high levels of EE and 76% experienced low PA. In the study by Thorsen et al (2011), 72% of nurses working in Malawi reported emotional exhaustion, 43% reported depersonalisation while 74% experienced

reduced personal accomplishment. Malliarou et al (2008) indicated that 45.3% of Greek nurses experience high level emotional exhaustion, 40.6% high depersonalisation, and low personal accomplishments are not presented in the sample. Koivula et al (2000) found that 48.6% of Finish nurses had scores which indicated they were burnt. Hooper et al (2010) indicated that 82% of nurses in USA had moderate to high levels of burnout. Mealer et al (2009) found that among USA nurses, 86% had moderate burnout; 73% had high EE, 48% had high DP and 60% had low PA. Spence et al (2009) found that Canadian nurses reported relatively high levels of emotional exhaustion and 47.3% scored severe burnout. Cho (2006) indicated that 66% of new graduate nurses in Toronto, Canada had severe Emotional exhaustion. Laschinger et al (2004) underlined that 58% of Canadian nurses reported severe exhaustion and 19% reported severe cynicism.

6.4 Burnout and demographic variables

6.4.1 Gender

Male hospital nurses reported more burnout (EE) than female nurses in Gaza. Female-typed occupations tend to be rich in emotional and interpersonal stressors (Maslach et al, 2001). Women learn how to handle emotional and interpersonal demands because such skills are central to the socially proscribed female gender role, while men may lack such skills because they are not necessary for successful fulfilment of the male gender role (Purvanova & Muros, 2010). Female-typed occupations, such as nursing, are less valued than male-typed occupations, and low self-perceived occupational status was predictive only of men's, but not of women's, burnout (Buunk, Peiro, Rodriguez & Bravo, 2007).

These results are similar to what was reported in a study on gender differences in relation to burnout that was carried out by Bekker, Croon & Bessers (2005). The male respondents in their study were found to be more emotionally exhausted than the female respondents. In a study on Iranian nurses, it was found that while the male nurses felt more depersonalised than the female nurses, the emotional exhaustion mean scores were comparable (Sahraian, Fazelzadeh, Mehdizadeh & Toobaee, 2008). A study of Mexican nurses by Martinez-Lopez & Lopez-Solache (2005) reported that the male respondents were in general more likely to suffer from the burnout syndrome than were the female respondents. Zani & Pietrantoni (2001) found that male nurses in Italy scored higher than female nurses for depersonalization and for lack of personal accomplishment. In contrast, female hospital nurses reported more burnout than male nurses in Mexico (De los Rios-Castillo de los Rios-Castillo, Barrios-Santiago, Ocampo-Mancilla & Avila-Rojas, 2007). Several studies found no differences in nurses' burnout were found due to gender (Al-Ma'aitah, Cameron, Horsburgh & Armstrong-Stassen, 1999; Bressi, Manenti, Porcellana, Cevales, Farina, Felicione, Meloni, Milone, Miccolis, Pavanetto, Pescador, Poddigue, Scotti, Zambon, Corrao, Lambertenghi-Deliliers & Invernizzi, 2008; Lederer, Kinzl, Traweger, Dosch & Sumann, 2008; Gandi, Wai, Karick & Dagona, 2011; Lin et al, 2009).

6.4.2 Public and private hospitals

Burnout was higher among nurses working in public hospitals. These results may be attributed to structural and functional differences between public and private hospitals. It may be that private affiliated hospitals offer better facilities, more incentives and superior working conditions to nurses compared with government hospitals, which

usually have limited financial and human resources to offer to employees (Abushaikha & Saca-Hazboun, 2009). The disparity between public and private health care settings continues to be an issue of debate and warrants more in-depth investigation. These results are similar to findings of other studies (Tyson & Pongruengphant, 2004; De los Rios-Castillo et al, 2007; Albion, Fogarty & Machin, 2005). In contrast, burnout was lower among nurses working at public hospitals in India (Tankha, 2006). In their cross-sectional survey among 312 professional nurses working in public and private hospitals in South Africa, Koen, Van Eeden & Wissing (2011) found no significant differences in the level of burnout in nurses working in public and private hospitals.

6.4.3 Age

No significant differences were found between young and old nurses. This is similar to findings of other studies (Mojde et al, 2008; Mansour et al, 2011; Lindo et al, 2006). The results of Foster (2003) showed that younger nurses experienced lower level of Emotional Exhaustion because older nurses usually have more family responsibilities than younger ones (Cooke, 2007). However, this finding differs from Ilhan, Durukan, Taner, Maral & Bumin (2008) found that the EE and DP scores were higher in younger nurses and that the scores for a lack of personal accomplishment were also higher. Maslach & Jacksons's (1996) found that older nurses in the United States experienced a lower level of burnout in Emotional Exhaustion, Depersonalisation, and reduced Personal Accomplishment than younger nurses. Maslach et al (2001) tried to explain why predominantly higher burnout risks for younger employees are found and pointed out the possibility that this is due to a survival bias.

6.4.4 Experience

Burnout (DP and LPA) was higher among nurses with more experience in Palestinian hospital nurses. This is similar to findings in many studies (Quattrin et al, 2006; Lin et al, 2009; Akkus et al, 2010; Al-Turki et al, 2010). In contrast, burnout was higher among nurses with less experience (Brewer & Shapard, 2004; Patrick & Lavery, 2007). No differences in nurses' burnout were found due to experience in Turkey (Demir et al, 2003).

6.4.5 Specialisation

Burnout (EE and DP) was higher among nurses working in (ICU). The care demanded by patients in the ICU is so intense both in technological and emotional terms, and also so complex and time pressured. Multiple pressures is placed on ICU nurses as a result of the increased responsibility for caring of bigger numbers of hospitalised patients, and the emotional saddle of attending the deterioration and possible death of patients in their care (Richter, Rochat, Hsiao & Zuma, 2012). If nurse training, skills, and support are not equal to care demands, it can lead to reduction in nurses' resources to care for critical patients and communicate with their families. The possible reasons for this could be that these nurses face more death and dying. Another explanation is that they only care for patients for a short period of time when they are critically ill, because patients will be transferred to other wards when their clinical conditions become stable. Nurses working in an intensive care unit rarely see patients returning home when hospital treatments are successful. Being unable to see outcomes for patients they care for may lead to limited feelings of success.

Cole, Slocumb & Mastey (2001) reported that intensive care units are recognised as most stressful units for nurses. Bakker, Le Blanc & Schaufeli (2005) concluded that burnout among 1849 intensive care unit nurses working in one of 80 intensive care units in 12 different European countries was contagious. Mohamed, Gaafar & Abd Alkader (2011) indicated that the neonatal intensive care unit "NICU" was the most stressful unit for nurses in paediatric hospital. At different departments nurses are confronted with different work tasks, working conditions and hence different level of burnout. Yousefy & Ghassemi (2006) and Sahraian et al (2008) indicated that psychiatric nurses experienced a greater degree of emotional exhaustion than other nurses. De los Rios-Castillo et al (2007) and Browning et al (2007) found that nurses working at the emergency room had burnout more often. Ksiazek et al (2011) and Flynn et al (2009) concluded that intensity of burnout syndrome among nurses was significantly higher among oncology nurses. Al-Turki et al (2010) found nurses in the patients' wards and clinics had higher burnout levels than other departments. Lin et al (2009) and Hooper et al (2010) found no differences in burnout level among nurses due to the department they work in.

6.4.6 Qualifications

Burnout is similar among nurses regardless their qualifications. This could be related to the fact that nurses in Gaza do the same work particularly in the absence of job description for nurses based on their qualifications. Several studies supported the findings of this study and found no relationships between burnout and qualifications of nurses (Mansour et al, 2011; Harrisson et al, 2002; Mohamed et al, 2011; Tourangeau, Coghlan, Shamian & Evans, 2005). Some studies indicated that burnout

was higher among less qualified nurses (Golubic et al, 2009 Demir et al, 2003), while others found it higher among more qualified nurses (Kennedy, 2005; Koivula et al, 2000; De los Rios-Castillo et al, 2007; Patrick & Lavery, 2007; Erdem, Rahman, Avci, Goktas, Senoglu & Firat, 2008).

6.4.7 Marital status

Burnout is similar among nurses regardless their marital status. This is similar to findings of some studies (Koen et al, 2011; Erdem et al, 2008). Burnout was higher among married nurses in other studies (De los Rios-Castillo et al, 2007; Al-Turki et al, 2010; Al-Turki, 2010). In contrast, burnout was higher among single nurses (Akgun, Al-Assaf & Bakar, 2008; Lin et al, 2009). In a study by Ifeagwazi (2006) on 91 female Nigerian nurses, of whom 51 were married and 40 were widowed, the results showed that the widowed nurses reported a significantly higher range of burnout symptoms than the married nurses.

6.4.8 Night shifts

Nurses working more night shifts reported higher burnout (EE, DP, Low PA). This result is similar to findings of severalstudies (Demir et al, 2003; Malliarou et al, 2008; Lang, Pfister & Siemens, 2010). Day shift nurses felt more socially supported at work than night shift nurses (Gallagher & Gormley, 2009). Unlike professionals who work only during the day, nurses are expected to work both day and night. Long-term night shift-working has even been suggested to increase the risk of cardiac problems (Scott 2000). Working nights is a challenge for most nurses especially when one has to

work for 4-5 nights in a row. Working night shifts may cause sleep deprivation increasing diastolic blood pressure and lowering muscle sympathetic nerve activity (Ogawa, Kantayashi, Saito, Takahashi, Kitajima, Takahashi, Hishikawa & Shimizu, 2003). Rauchenzauner et al (2009) found that neuroendocrine stress response increases during night shifts. Nurses who work night or irregular shifts are prone to increase nurse errors (Arimura et al, 2010) and mental health problems (Abdalkader & Hayajneh, 2008).

6.4.9 Extra work

Burnout has been found to be similar among nurses who work and do not work extra time. Arikan et al (2007) cited the long work hours as an important cause of burnout. A study by Isikhan, Comez & Danis (2004) found that long working hours was one of the main factors that increase stress and burnout among Turkish nurses who were working with cancer patients. Palfin (2008) concluded that requiring nurses to work extra hours above normal shift hours was found to be one of the factors that contributed to development of burnout in Hungarian nurses. Other research conducted on Australian nurses reported that nurses associated having to work overtime with emotional exhaustion and feeling pressured. The expectation that nurses would work overtime was positively correlated with emotional exhaustion and depersonalisation (Patrick & Lavery, 2007). In contrast, Stone, Du, Cowell, Amsterdam, Helfrich & Linn (2006) found that nurses working 12-hour shifts in New York hospitals reported less burnout than those working 8-hour shifts. Douglas & Bevis (2004) concluded that working

overtime by nurses will increase their income and this may decrease their level of stress and burnout.

6.4.10 Monthly salary

It shows no significant differences in salary of nurses regarding the MBI-EE. In Gaza, nurses who were hired in governmental hospitals before the conflict between Hamas and Fatah followed by partition between Gaza and West Bank receive a monthly salary of around $600 (basic salary + risk allowance) but nurses who were hired after partition receive around $300 (basic salary only). Deeming & Harrison (2002) and Duffin (2002) suggest that improving pay is the only long-term answer to the UK's nurse recruitment and retention difficulties. Improved funding of the NHS (Department of Health 2002) may go some way to improving the situation, but according to the (Royal College of Nursing Conference (RCNC), 2002) it is questionable whether the anticipated pay awards will be sufficient recompense for the current level of workload. Zangaro & Soeken (2007) indicatedthat despite this high level of dissatisfaction with salary, nurses have fairly consistently ranked other work environment factors as being of more concern than money.

6.5 The burnout reduction programme

Preventing and reducing work related burnout is of great importance not only with regard to the quality of life of nurses affected, but also for preventing the economic losses which come about as a result of absenteeism and job turnover (Awa, Plaumann & Walter, 2010). The intervention programme carried out in this study was generally

helpful in reducing burnout and leading to positive effects on moderate and high levels of burnout, while no positive effects in mild level of burnout was registered. This intervention programme was person-directed intervention rather than organisation-direct intervention. It has been found that about 82% of all person-directed interventions led to a significant reduction in burnout or positive changes in its risk factors (Awa et al, 2010). In the burnout reduction programme, only 90 participants were chosen randomly from the different three levels of burnout (high, moderate, and low). Those participants represented the three different levels of burnout; 30 nurses for each level were divided into 2 groups with; 15 as intervention group and 15 as control group.

Only one session weekly that lasts for 2 hours was applied for intervention groups and for a period of 9 weeks consecutively. The implementation of the burnout reduction programme was based on the Transactional theory and used different techniques; discussion, feedback, reflection, homework, lecture, self-expression, role play and psych and socio-drama.

The results show short term positive intervention effects on burnout among hospital nurses as long term effect was not assessed because of time limit in this study. However, we were able to demonstrate that these positive outcomes can be achieved when changing perceptions and coping styles which affect the emotion and behaviour of nurses. To the best of our knowledge, this is the first study carried out in Palestine and Arab countries. Nurses in our study showed improvements in burnout on all three subscales of the MBI. This finding was consistent with study of Ewers et al (2002). Doyle, Kelly, Clarke & Braynion (2007) showed only significant change was in personal accomplishment.

6.6 Application of the transactional theoretical framework to the present study

According to the transactional model, the inability of nurses to cope with the work-related stress due to poor fit between their capabilities and their work needs and conditions will result in physiological, emotional and cognitive responses and behavioural reactions.

When an event happens, 'cognitive appraisal' will activate to enable the nurse to evaluate it as a threat, challenge or irrelevant. This explains why people sometimes respond in different ways even to the same situational and cultural influences. If the event was viewed as a threat or a challenge, nurse then appraises if it is controllable or uncontrollable. Generally, appraisals of controllability draw behaviours aimed at eliminating threat (problem-focused coping), and appraisals of uncontrollability draw behaviours aimed at reducing negative emotions (emotion-focused coping). Nurses then reappraise the stressfulness of the event based on the outcome of the coping behaviours employed according to the second process 'coping'. This involves the evaluation of coping resources and alternative responses. Adaptive coping behaviours lead to adjustment and maladaptive behaviours leads to high level of burnout. The high percentage of burnout confirms that events were perceived as stressful and the coping strategies used were not effective to deal with such stresses.

To understand the potential for risk of exposure to stress, there must be an appreciation of the nurses' beliefs, views and practices to stress and an understanding of their coping mechanisms. For example, without a better understanding of what nurses believe and practise in relation to stress, we cannot understand if getting burnout is the result of exposure to occupational stressors.

In the same way, the burnout reduction programme has been utilised. As the perception of the event and the coping strategies used were significant in the theory, this means if we used these concepts to make changes of perceptions and behaviour when facing the stressor (s). The main idea was to change the nurses' perceptions regarding the stressor as a challenge which improves the capability of nurses to deal with it. Also, the way of coping will be changed from just relieving the negative feeling temporarily to dealing effectively with the stressor and find solution to the problems.

6.7 Conclusion

The systematic approach used in this study examines the prevalence of burnout in nurses worldwide. However, there was limited quantitative literature in this area in Palestine and other Arab countries which suggests that this area requires further exploration. This study has given an insight into occupational burnout among hospital nurses in Gaza Strip and explored the factors responsible for the same. Also, it has tried to create a ladder of concern, with which the burnout running in the nurses' work should be geared in burnout reduction programmes. This should provide an appropriate path and help in designing effective burn reduction programmes to improve the burnout levels of nurses and thus enable them to provide better patient care.

This study has provided an insight into the problem of burnout amongst nurses and deciphered the factors responsible for the same. This should give a proper direction and aid in designing more efficient burnout reduction programmes for them. These findings may go a long way in improving the mental health and burnout levels of nurses and thereby enabling them to provide better patient care.

The most important finding of this study was that the severity of the reported burnout in registered nurses was high enough to be considered serious.

From these results one can conclude that nurses in Gaza need more attention to deal with their psychological conditions. Nursing managers and other in charge personnel are in good position to support nurses, especially when nurses express different sources of stress. Nurses should be cared for their stress as they represent more than 60% of manpower in Ministry of Health in Gaza. There may also be some benefit in offering formal burnout reduction training to nurses, especially if such approaches can be tested systematically through formal research programmes. Being a Palestinian nurse is a stressful experience; the utility in any future research is finding out how best these nurses can be helped reduce this burnout.

6.8 Strengths and limitations of the study

As this is the first study that assesses prevalence of burnout among hospital nurses in Gaza and to test the effectiveness of burnout reduction programme, it has several strengths and some limitations.

6.8.1 Strengths of the study

1. One of the most important strengths of this study is the combination between the prevalence of burnout and the effectiveness of burnout reduction programme. Although the prevalence approach helped to include a large sample size of the nurses, the programme approach, however, helped to provide rich and meaningful information about the nurses' experiences with burnout. It provided a detailed and

extensive understanding of how the nurses perceive their burnout and how they and their practice were affected by the burnout.

2. The use of well validated measure, MBI, already translated into different languages and used in many countries was used to assess burnout among hospital nurses in Gaza.

3. The extremely good response rates help to ensure that survey results are representative of the target population. A response rate of 88.7% may indicate accurate and useful results. The satisfactory response rate could be related to appropriate study design and giving the questionnaires to nurses in hands.

4. Being the first study of its kind undertaken under difficult circumstances soon after the war gives the study another point of strength.

5. The sample size was adequate to carry out this study as it represented all hospital nurses in Gaza (if we exclude the nurses in strike for political reasons). The choice of large sample size of nurses in a certain area ensures a higher degree of confidence that the sample represents the population under study, decreases type II error (beta error), and increases the power of statistical tests (Robson, 2002).

6. This study assessed not only burnout among hospital nurses in Gaza, but also carried out burnout reduction programme among them, which is highly important particularly after the difficulties following the last war against Gaza.

7. Nobody has drawn from “controls” or “interventions” groups, which made the results more accurate.

8. Exclusion of some cases due to exclusion criteria has a powerful and positive impact on the study results. Thirty participants, who participated in the pilot study were excluded to prevent testing effect (the effects of taking pre-test on the scores of post-test) as a threat to internal validity (Polit & Beck, 2008).

6.8.2 Limitations of the study

Despite its strengths, the study has also some limitations:

1. The questionnaires relating to burnout were only received by nurses who were in employment in the hospitals. A selection bias may have happened because the investigator could not contact the nurses who were absent from work during data collection because of the recent strike of more than 300 nurse due to political issues. The numbers of participants from private hospitals were limited as one of these hospitals could not be reached for safety reasons and another one was affected seriously during the last war against Gaza and was not working fully during data collection.

2. The search strategy of this study was limited to publications in English, thus, potentially relevant studies in other languages were excluded. Only 3 data bases were searched between 2003 and 2012. This meant that relevant studies available elsewhere and published outside this time frame could also have been left out.

3. Burnout measurement was based on self-report rather than by physiological biochemical analyses or by physical assessments. Since burnout had no objective definition or criteria; hence different subjects may have interpreted it differently. The investigator firmly believes that the above limitations have not defeated the

purpose of the study. This study has provided an insight into the problem of burnout amongst nurses and deciphered the factors responsible for the same.

4. The war makes it difficult to know if this burnout is war-related or always the case because of chronic understaffing/management issues, poor health, etc…..

5. The instrument utilised in the present study was based on American and European populations and may not have been culturally appropriate for the Palestinian nurses. Some procedures were taken by the investigator to overcome this issue by using back translation technique, expert opinion and pilot study.

6. As time was limited for PhD period, follow-up assessment was not completed after 3 or 6 months of intervention.

6.9 Recommendations

Based on the results of the study, some recommendations were made with specific reference to nursing research, nursing education and nursing practice.

The level of burnout was high among Gaza nurses, which indicated the need for more burnout reduction programmes.

As part of study limitation the use of only subjective data expressed by participants, future research should be directed at the intensity dimension using physiological measures of stress. This type of study has been conducted in several countries but not in Palestine particularly in Gaza.

Education and training programmes should be aimed at recruiting and developing personnel who are competent to respond appropriately to the health care needs of the

people they serve. Education and training should comprise relevant, reality-based curriculum that is congruent with the situation in Gaza such as dealing with emergency triage and causalities more than normal.

Workload was found to be the first occupational stressor when applying the burnout reduction programme, so efforts should be taken to reduce the impact of stressors by organisational interventions. These interventions might include employing more registered nurses which is an obvious potential remedy for reducing workload, increasing enrolled nurse auxiliaries and the efficient use of them to perform functions within their scope of practice such as taking patients temperature, blood pressure will allow the registered nurses to concentrate on their functions and increasing clerical staff to reduce non-nursing tasks. Employing new staff is not easy decision in the current financial condition but this depends on how the Palestinian Ministry of Health in Gaza is convinced to take this decision according to priority. Schriver, Talmadge, Chuong & Hedgesm (2003) have elucidated the current and future roles of the nurse highlighting the need to improve the nurse-to-patient ratios, staff scheduling, increasing nursing wages, recognizing contributions of nurses with financial reward, developing internships for nurses new to department and to invest in nursing education.

Dracup & Bryan-Brown (2005) have also highlighted the need for an improved staff scheduling to reduce nurse burnout. She has rightly pointed out that it is difficult for nurses to perform without errors with a break time of less than 30 minutes in a 12-hours shift. Rogers et al (2004) have statistically shown that nurses who worked more than 12.5 consecutive hours were 3 times more likely to make an error due to fatigue especially at the end of a shift and when trying to finish a multitude of tasks, complete

charting, and report to the incoming nurse. Lockley, Cronin, Evans, Cade, Lee, Landrigan, Rothschild, Katz, Lilly, Stone, Aeschbach & Czeisler (2004) have also reported the importance of reducing the work hours and need of enough sleep in effective patient care. Fitzpatrick, While & Roberts (1999) have demonstrated that 12-hour shifts are associated with reduction in nurse performance.

Specific minimum nurse-to-patient ratios is yet another measure that will reduce burnout (Spetz, 2004).

Providing support and improving working conditions and counselling services after stressful events should be provided. Managers can lessen burnout levels of subordinates by developing systems for effective two-way communication, clarifying role and performance expectations, constructive resolution of conflicts, developing policies that reduce burnout from shift work, support group for nursing personnel, psychological counselling and therapy should be easily accessible and available for troubled staff members, and increasing observational skills in order to detect increased burnout signs or levels of burnout.

The findings of this study provide several implications and recommendations to nursing administration and nursing research. The nursing administrators should consider death/dying and workload as major stressors and find strategies to manage nurse's workload and facilitate the comfortable workplace for nurses while dealing with patient's death/dying. The nursing administrators also need to encourage their staff nurses to utilise more problem-focused coping strategies than emotion-focused and dysfunctional coping.

Over a prolonged period, stress and burnout could lead to increased risk of health problems, both mental and physical. Consideration needs to be given to what aspects of the occupational stressors are amenable to change, and what practical steps, if any, can be taken to identify and support vulnerable individuals at an early stage. A rational strategy for the Ministry of Health would be to provide employment environments in which nurses can practice effectively without compromising their own health.

Strategies to reduce harmful effects on nurses' health should include reduction of frequency and intensity of identified stressors, early detection of problems and maladaptive coping (e.g. drug use), and effective medical treatment and rehabilitation of the sick nurse. Family and friends are suggested to be included in counselling procedures as they are considered the primary choices for emotional support (Brown & Edelmann, 2000; Lo, 2002). Many work-based burnout reduction programmes ignore factors outside of the work environment, an irony considering that individuals' private lives frequently spill over into their work lives (Jones & Johnston, 2000; Weinberg & Creed, 2000).

6.10 Contributions of the study

The study contributed to the knowledge base of nursing by assisting readers to obtain an understanding of the burnout experienced by nurses in Gaza-Palestine. The burnout reduction programme development was also a unique contribution of this study.

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APPENDICES

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APPENDIX (1)

Hawker's et al (2002) tool for quality of research papers

Area	Good =4	Fair=3	Poor=2	Very poor=1
Abstract and title	Structured abstract wit full information and clea title.	Abstract with most c the information.	Inadequate abstract	No abstract
Introduction and aims	Full but concise background to discussion/study containing up-to date literature review and highlighting gaps in knowledge. Clear statement of air AND objectives includin research questions	Some background and literature review. Research question outlined.	Some background but n aim / objectives/questions, OI Aims / objectives bu inadequate background	No mention of aims / objectives No backgroun or literatur review.
Method and data	Method is appropriate and described clearly. Clear details of the dat collection and recording	Method appropriate, description could be better. Data described.	Questionable whether method is appropriate Method described inadequately Little description of data	No mention of method, AND / OR Method inappropriate, AND/OR No details c data.
Sampling	Details (age /gender /race /context) of who was studied and how they wer recruited. Why this group was targeted. The sample size was justified for the study. Response rates shown an explained	Sample size justified. Most information given but some missing	Sampling mentioned bu few descriptive details.	No details c sample
Data analysis	Clear description of how analysis was done. Qualitative studies: Description of how theme derived /respondent validation or triangulation Quantitative studies: Reasons for tests selected hypothesis driven / numbers add up / statistics discussed.	Qualitative: Descriptive discussion of analysis. Quantitative	Minimal details abou analysis	No discussion c analysis

Ethics and bias	Ethics: Where necessary issues of confidentiality, sensitivity, and consent were addressed. Bias: Researcher was reflexive and/or aware of own bias.	Lip service was paid t above	Brief mention of issues	No mention c issues
Findings/results	Findings explicit, easy to understand, and in logical progression. Tables, if present, are explained in text. Results relate directly to aims. Sufficient data ar presented to suppo findings.	Findings mentioned but more explanation could be given. Data presented relat directly to results.	Findings presented haphazardly, not explained, and do not progress logically from results.	Findings nc mentioned or d not relate t aims.
Transferability / generalizability	Context and setting of the study is described sufficiently to allow comparison with other contexts and settings, plus high score in Question 4 (sampling).	Some context and settin described, but more needed to replicate or compare the study with others, PLUS fair score or higher in Question 4.	Minimal description c context / setting	No descriptio of context setting
Implications and usefulness	Contributes something new and/or different in terms of Understanding /insight or perspective. Suggests ideas for further research Suggests implications fc policy and / or practice	Two of the above (stat what is missing i comments).	Only one of the above	None of th above
Total				

APPENDIX (2)

Covering Letter for Questionnaire Pack

Dear Nurse

Nurse Stress Study

I am a PhD student in nursing. For my PhD, I am conducting research into burnout among hospital nurses in Gaza. To gain an accurate picture, I am asking all hospital nurses to take part.

I enclose a questionnaire that I would ask if you would be kind enough to complete. The questionnaire is self-explanatory and should take you no more than 15 minutes to complete. Once completed, put it in the sealed box available for this purpose in your department.

Please read the enclosed information sheet, which tells you more about the study. If you have any further questions, do not hesitate to contact me.

Thank you very much for your time.

Yours sincerely

Bashir Alhajjar

PhD Student

University of Witwatersrand-Republic of South Africa

APPENDIX (3)

Participant Information Sheet

"A programme to reduce burnout among hospital nurses in Gaza, Palestine"

My name is Bashir Alhajjar. I am a PhD student in nursing at University of Witwatersrand, Republic of South Africa. This is an invitation to take part in a research study. Before you decide whether to take part, you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully.

This Information Sheet tells you the purpose of this study and what will happen to you if you take part.

What is the purpose of the study?

It is known internationally that the nursing population, due to the nature of the job, is a community that experiences stress and burnout. There is an abundance of literature in relation to nursing burnout in Western Countries, but nothing has been undertaken in Gaza. It is especially important to look at Gaza given the conditions many nurses have to work after the war under: traumatic wounds sustained by people which they are required to care for, the lack of salary, the lack of medical supplies especially drugs, political insecurity and political conflict between Palestinian factions which may lead to stress and burnout. The aim of the first part of study is to explore the prevalence and nature of burnout in population of nurses in Gaza. The aim of the second part of study is to develop a strategy for reducing burnout and test its effectiveness.

Why have I been invited?

Simply, because you work as a nurse in one of the governmental or non-governmental Gaza hospitals.

Do I have to take part?

No. Participation is entirely voluntary and a decision not to volunteer will not result in any consequences. Read this information sheet, which is yours to keep, before you decide. Should you agree to participate in the first part of study, please indicate your willingness by signing this consent form and put it together with the completed questionnaire in the sealed box made available for this purpose in your department

What will happen to me if I take part?

I would like you to complete the questionnaire sent to you and to return it to me by posting it in the clearly marked sealed box in your department.

What are the possible benefits and possible disadvantages of taking part?

There is no direct benefit to you in taking part but your participation will help us to discover the extent to which the hospital nurses in Gaza are under burnout. The main disadvantage is that participation would involve a commitment of up to 15 minutes of your time to complete the questionnaire.

Will my taking part in the study be kept confidential?

Yes. We will follow standard ethical and legal practice and all information about you and your participation will be handled in confidence. Data will be stored securely on a password-protected university server and kept for 5 years.

Are my responses anonymous? Can I be identified?

Though your name is not required, you will see, in the top right-hand corner of Part A of the questionnaire, a 5-figures ID number. A list exists that enables me to identify you from this number if the need arises. I am the only person allowed to have access to this list. A condition of the study is that I have to keep this list separate from the questionnaires and it has to be stored securely under lock and key.

What should I do if I express any distress during the process?

Participation is strictly voluntary and decision not to volunteer will not result in any penalty or loss of benefits. You have the right-even after consenting-to withdraw from the study and refuse to provide any specific piece of information. You can call the researcher who will arrange with you for further support.

What happens to the questionnaires once they're returned?

Your responses will be coded and the coded data entered into a computer. Though I can identify you from your ID number, I am not allowed to store your name or contact details on the computer. At the end of the study, the questionnaires and the ID number list will be destroyed.

What will happen to the results of the research study?

The results will help in the planning of further research in this area. They will be written up as a report (my PhD dissertation) which will be used as the basis of journal articles and/or conference presentations. You will not be identified in any report/publication emanating from the study.

Who's carrying out the study?

I am Bashir Alhajjar, a lecturer of mental health at Faculty of Nursing, the Islamic University of Gaza. I am carrying out the study in my role as a PhD student (the study is my PhD project). The study is being supervised by Dr Gayle Langley from University of Witwatersrand, Johannesburg, Republic of South Africa. The study has also received ethical approval of University of Witwatersrand and approval of Palestinian Ministry of Health.

Who has reviewed the study?

This study has been reviewed and given a favourable opinion by University of Witwatersrand Human Research Ethics Committee **(ref: / M10649)**.

What if I have a complaint?

Email my supervisor within the School of Nursing at the University of Witwatersrand, Dr Gayle Langley, at gayle.langley@wits.ac.za

Any further questions?

Contact the Chief Investigator, **Bashir Alhajjar**

Mobile: 059 9221984
Email: Bashir.AlHajjar@students.wits.ac.za

APPENDIX (4)

Consent Form

Dear Colleague

My name is Bashir Alhajjar. I am a PhD student in the Department of nursing at University of Witwatersrand, Johannesburg, Republic of South Africa.

For my PhD, I am conducting a research study into burnout among hospital nurses in Gaza. This study has two parts. The aim of the first part is to explore the prevalence and nature of burnout in total population of nurses in Gaza, while the aim of the second part is to develop a strategy for reducing burnout and test its effectiveness. To gain an accurate picture, I am inviting all hospital nurses to take part. Participation will entail filling out a questionnaire which should not take you much longer than 15minutes.

The following information is provided in order to help you to make an informed decision whether or not to participate. If you have any question, please do not hesitate to ask.

Participation is entirely voluntary and a decision not to volunteer will not result in any consequences. All information about you and your participation will be handled in confidence. I am the only person allowed to have access to the names' identifying list. You will only be identified by a unique number which will tell me where you work and who you are. I will be able to identify you by referring to a second, securely locked list of names. This is necessary as I aim to conduct a second part of study with people who might benefit from a burnout reducing programme. Should you agree to participate in the first part of study, please indicate your willingness by signing this consent form and put it together with the completed questionnaire in the sealed box made available for this purpose in your department.

All information collected will be kept in a secure, locked computer. Your name and other identifying details will not be known and you will not be able to be identified in any way except by me.

You will not benefit in any way from filling out the form, so I do thank you for considering participation.

I enclose a questionnaire that I would ask if you would be kind enough to complete. The questionnaire is self-explanatory.

Please read the enclosed information sheet, which tells you more about the study. If you have any further questions, do not hesitate to contact me.

Thank you very much for your time.

Yours sincerely

The researcher
Bashir Alhajjar
PhD student
Mobile: 059 9221984
Email: Bashir.AlHajjar@students.wits.ac.za

Participant's Signature

APPENDIX (5)

PART A: Strictly Confidential

University of Witwatersrand

School of Nursing

Instructions:

This questionnaire contains two parts: Part A (this part), which contains questions specific to this particular study, and Part B which contains a standard questionnaire that is often used in burnout research.

Please complete both parts, answering each question in sequence and carefully following any instructions given.

To ensure that the results are accurate, please answer the questions honestly. Remember that the responses you give are **confidential** and your responses will not be given to **anyone** under **any** circumstances.

THANK YOU FOR TAKING PART

Q1. Your gender? (tick box)

☐Male ☐Female

Q2. Your age? (write in) _____

Q3. Marital status? (tick box)

☐Single ☐ Married ☐Divorced ☐Widow/Widower

Q4. Highest qualification achieved? (tick box)

☐2years diploma ☐3years diploma ☐Bachelor ☐Postgraduate
☐diploma Master ☐Other:_____

Q5. Years of experience as a qualified nurse? (write in) _____

Q6. Name of Department you work in? (tick box)

☐ ER ☐ ICU ☐ CCU ☐ Medical ☐ Surgical ☐ Orthopaedic
☐ Paediatric ☐ Dialysis ☐ Neonate ☐ Oncology ☐ Burn ☐ Other

Q7. Do you work extra hours?

☐ Yes ☐ No

If yes, please how many hours per week? (write in)_____

Q8. Night shifts you work monthly? (write in)_____

Q9. Monthly salary in USD? (tick box)?

☐ Less than 300 ☐ 301-600 ☐ 601-900 ☐ Over 901

FURTHER RESERARCH

Q10. In order to test whether the level of burnout among nurses can be reduced, a special programme will take place. This programme will be implemented after exploring the level of burnout among hospital nurses. Ninety nurses will be chosen and invited for the burnout reduction programme (45 interventions, and 45 controls).

Would you be interested in taking part in this programme?

☐ Yes ☐ No

THANK YOU FOR COMPLETING PART A.

NOW COMPLETE PART B OF THIS QUESTIONAIRE PACK

PART B: Strictly Confidential

University of Witwatersrand

School of Nursing

PART B: FORMAL MEASURES

Inside this part, you will find a formal measure for you to complete. This measure is frequently used in burnout research.

PLEASE FOLLOW THE INSTRUCTIONS GIVEN.

RETURNING THE QUESTIONNAIRES

Once you have completed this questionnaire, seal Part A and Part B in the envelope provided.

It is not collected in person, put in the box available for this purpose in your department.

THANK YOU VERY MUCH FOR YOUR TIME.

Maslach Burnout Inventory (MBI)

How have you been feeling over the past few weeks?

Please answer questions 1 to 22, below by circling the answer which you think most nearly applies to you.

No.	Item	Never	A few times a year or less	Once a month o less	A few times a month	Once a week	A few times a week	Everyda
1	I feel emotionally drained from work.	0	1	2	3	4	5	6
2	I feel used up at the end of the workday.	0	1	2	3	4	5	6
3	I feel fatigued when I get up in the morning and have to face another day on the job	0	1	2	3	4	5	6
4	I can easily understand patients' feelings.	0	1	2	3	4	5	6
5	I treat patients as impersonal ''objects''.	0	1	2	3	4	5	6
6	Working with people puts too much stress.	0	1	2	3	4	5	6
7	I deal effectively with the patients' problems.	0	1	2	3	4	5	6
8	I feel burned out from work.	0	1	2	3	4	5	6
9	I feel I'm positively influencing other people's lives through my work.	0	1	2	3	4	5	6
10	I've become more callous toward people.	0	1	2	3	4	5	6
11	I worry that this job is hardening emotionally.	0	1	2	3	4	5	6
12	I feel very energetic.	0	1	2	3	4	5	6
13	I feel frustrated by job.	0	1	2	3	4	5	6
14	I feel I'm working too hard on my job	0	1	2	3	4	5	6
15	I don't really care what happens to patients.	0	1	2	3	4	5	6
16	Working with patients is a strain.	0	1	2	3	4	5	6
17	I can easily create a relaxed atmosphere.	0	1	2	3	4	5	6
18	I feel exhilarated after working with patients.	0	1	2	3	4	5	6
19	I have accomplished many worthwhile things in my job.	0	1	2	3	4	5	6
20	I feel like I'm at the end of my rope.	0	1	2	3	4	5	6
21	I deal with emotional problems calmly	0	1	2	2	4	5	6
22	I feel patients blame me for their problems.	0	1	2	3	4	5	6

MANY THANKS

APPENDIX (6)

Covering Letter for Questionnaire (in Araic)

رسالة التغطية

أخي الممرض / أختي الممرضة

بحث الاحتراق لدى الممرضين

أنا طالب دكتوراه في التمريض وكمتطلبات الدراسة، أقوم بعمل بحث عن الاحتراق لدى ممرضي / ممرضات المستشفيات في غزة. وللوصول إلى صورة دقيقة فإنني أطلب من جميع ممرضي / ممرضات المستشفيات أن يشاركوا في هذا البحث.

مرسل لك استبانة لقياس مستوى الاحتراق أرجو منك تعبئتها. إن تعبئة هذه الاستبانة لن يأخذ من أكثر من ربع ساعة. وبعد تعبئتها، أرجو وضعها في الصندوق المخصص لهذا الهدف والموجود في القسم الذي تعمل فيه.

الرجاء قراءة المعلومات المرفقة والتي تخبرك أكثر عن الدراسة. إذا كان لديك أية أسئلة أو استفسارات، لاتتردد في الإتصال بي.

شكراً جزيلاً على مشاركتك ومنحك جزءاً من وقتك لهذا البحث

أخوكم

بشير الحجار

طالب دكتوراه

جامعة وتووترزراند-جمهورية جنوب أفريقيا

APPENDIX (7)

Participant Information Sheet (in Arabic)

نشرة معلومات المشارك

هذه دعوة للمشاركة في هذه الدراسة البحثية. وقبل أن تقرر المشاركة عليك أن تفهم أسباب الدراسة. وماعلاقتك بها. الرجاء أن تأخذ وقتاً كافياً لقراءة المعلومات التالية بعناية. إن نشرة معلومات المشترك تخبرك بأهداف الدراسة وماذا سيحدث لو أنك شاركت فيها.

مالهدف من الدراسة؟

من المعروف عالمياً أن مجتمع التمريض-بسبب طبيعة المهنة-يعاني من ضغوط العمل والإحتراق المهني. ويوجد العديد من الدراسات الغربية المتعلقة بالإحتراق لدى الممرضين / الممرضات ولكن لايوجد دراسات مماثلة في غزة. من المهم النظر إلى الظروف التي يحياها الممرضون / الممرضات في غزة حيث عليهم العمل في ظروف: رعاية الجروح الناتجة عن الحرب والقصف، قلة الراتب الشهري وتذبذب وصوله، نقص اللوازم الطبية والأدوية، عدم الأمان، بالإضافة إلى الإنقسام السياسي الفلسطيني.

لماذا تمت دعوتي للمشاركة؟

ببساطة، لأنك تعمل كممرض/ة مستشفى في واحدة من مستشفيات قطاع غزة (سواء حكومية أو غير حكومية).

هل يجب علي المشاركة؟

لا. المشاركة تطوعية بالكامل. اقرأ نشرة المعلومات والتي هي لك لتحتفظ بها قبل أن تقرر. يمكنك الإتصال بالباحث الرئيس إذا كنت ترغب في ذلك. إذا قررت المشاركة في البحث الرجاء تعبئة الاستبانة ووضعها في الصندوق المخصص لهذا الهدف في القسم الذي تعمل فيه كتأكيد على موافقتك على المشاركة في الدراسة.

تذكر: من أجل أن تكتمل الصورة، تم الطلب من كافة ممرضي/ممرضات المستشفيات أن يشاركوا في هذه الدراسة. كلما زاد عدد المشاركين في الدراسة كلما كانت الصورة أوضح.

ماذا سيحدث إذا شاركت في الدراسة؟

سيتم الطلب منك أن تكمل الإستبانات التي ستسلم لك على أن تعيدها معبأة إلى الصندوق المخصص لذلك في قسمك.

مالفوائد المتوقعة من مشاركتي وكذلك الضرر؟

لاتوجد فائدة مباشرة من المشاركة ولكن مشاركتك ستساعدنا في اكتشاف مدى وقوع الممرضين / الممرضات تحت الضغوط والإحتراق. أما الضرر الوحيد فيتمثل في أن المشاركة تتطلب التزاماً لمدة نصف ساعة لتعبئة الاستبانة.

هل مشاركتي في الدراسة سيبقى سرياً؟

نعم. سنتبع الممارسة القانونية والأخلاقية المعتمدة وكل المعلومات امتعلقة بك وبمشاركتك سيتم التعامل معها بسرية. وسيتم تخزينها على خادم الجامعة مع كلمة مرور سرية حيث يتم الإحتفاظ بها لمدة 5 سنوات بحسب لوائح الجامعة للبحث الجيد.

هل إجاباتي مجهولة؟ وهل يمكن التعرف علي؟

على الرغم أن اسمك غير مطلوب، كما ترى، في الجزء الأيسر العلوي في الجزء أ من الإستبانة، هوية تعريفية مكونة من 5 أرقام. القائمة الموجودة لدي تمكنني من التعرف عليك من خلال هذه الأرقام إذا ظهرت حاجة لذلك. إنني الشخص الوحيد المسموح له بالوصول إلى هذه القائمة. وكشرط لتطبيق الدراسة فإنه علي أن أحتفظ بهذه القائمة منفصلة عن الاستبانة ومخزنة بإحكام في خزانة مغلقة خاصة.

ماذا سيحدث للإستبانات المعبأة عند ارجاعها؟

سيتم وضع رموز للإجابات والمعلومات المرمزة سيتم ادخالها إى جهاز الحاسوب. على الرغم ن امكانية تعرفي عليك من رقم الإستبانة إلا أنه غير مسموح بتخزين اسمك أو تفاصيل الإتصال بك. وفي نهاية الدراسة، فإن الإستبانات وقائمة الأرقام التعريفية ستتم ابادتها.

ماذا سيحدث لنتائج الدراسة؟

ستساعد النتائج في التخطيط لدراسات أخرى في هذا المجال. ستكتب أيضاً على شكل تقارير وأبحاث في محلات علمية و/أو مؤتمرات علمية. لاتوجد خطط لتوزيع التقرير على المشاركين علماً بأن نسخاً مختصرة عن النتائج ستكون متوفرة عند الطلب.

مع العلم أنه لن يتم التعريف بك سواء في الرسالة الأصلية أو الأبحاث المنشورة ويمكن فقط استخدام نصوص معينة دون ذكر الأسماء.

من يقوم بتنفيذ الدراسة؟

بشير الحجار، محاضر الصحة النفسية في كلية التمريض بالجامعة الإسلامية في غزة. أقوم بتنفيذ الدراسة كطالب دكتوراه علماً بأن هذه الدراسة هي بحث التخرج. ويشرف على هذه الدراسة الدكتورة (Gayle Langley) من جامعة وتوترزراند. كذلك حصلت هذه الدراسة على موافقة لجنة الأخلاق بجامعة وتوترزراند وموافقة وارة الصحة الفلسطينية بغزة.

من قام بمراجعة الدراسة؟

تمت مراجعة الدراسة من قبل لجنة الأخلاق بجامعة وتوترزراند وكذلك من قبل المشرفة على الدراسة الدكتورة (Gayle Langley).

ماذا لو كان لدي شكوى؟

اتصل على مشرفي في كلية التمريض بجامعة وتوترزراند، الدكتورة (Gayle Langley) على تليفون xxxxxxxxxxx أو بريد الكتروني Gayle.Langley@wits.ac.za

أسئلة إضافية؟

اتصل على الباحث الرئيس: بشير الحجار

تليفون: 059 9221984

Email: Bashir.AlHajjar@students.wits.ac.za

APPENDIX (8)

Consent Form (in Arabic)

نموذج الموافقة

الأخوة الزملاء

اسمي بشير الحجار. أنا طالب دكتوراه في قسم التمريض بجامعة وتوترزراند، جوهانسبرغ، جمهورية جنوب أفريقيا.

من أجل دراستي، أقوم بعمل بحث عن الاحتراق لدى ممرضي/ممرضات المستشفيات في غزة. وتتكون هذه الدراسة من جزأين. الهدف من الجزء الأول هو الكشف عن مدى انتشار وطبيعة الاحتراق لدى جميع ممرضي/ممرضات المستشفيات في غزة، بينما الهدف من الجزء الثاني هو تطوير آلية لتقليل مستوى الاحتراق واختبار فاعليتها. ومن أجل الحصول على صورة واضحة، فإنني أدعو جميع ممرضي/ممرضات المستشفيات للمشاركة. وتتمثل المشاركة في تعبئة الاستبانة المرفقة والتي لن تأخذ من وقتك أكثر من 15 دقيقة.

إن المعلومات المرفقة مقدمة لتساعدك في اتخاذ قرار المشاركة من عدمه. وإذا كان لديك أي أسئلة، فلا تتردد في السؤال. إن المشاركة تطوعية بالكامل وإن القرار بعدم المشاركة لن ينتج عنه أية سلبيات. والمعلومات المتعلقة بك وبمشاركتك سيتم التعامل معها بسرية. إنني الوحيد القادر على الوصول لقائمة الأسماء المعرفة. وسيتم تعريفك برقم محدد أستطيع من خلاله التعرف عليك ومكان عملك. وسأكون قادراً علر التعرف عليك من خلال الرجوع إلى قائمة الأسماء الكوجودة في مكان محكم التأمين. وهذا الأمر ضروري للجزء الثاني من الدراسة وخاصة مع أناس قد يستفيدوا من برتامج تقليل الاحتراق. إذا وافقت على المشاركة في الجزء الأول، فدلل على موافقتك بإمضاء نموذج الموافقة ووضعه سوية مع الاستبانة المعبأة في الصندوق المخصص لذلك في قسمك.

إن جميع المعلومات ستكون محفوظة في جهاز حاسوب محكم التأمين وإن اسمك والتفاصيل اللمتعلقة بك لن تعرف بأي طريقة كانت إلا لي.

لا توجد فائدة محددة من تعبئة الاستبانة، لذلك فإنني أشكرك لمشاركتك في الدراسة.

مرفق طيه الاستبانة التي أطلب منك تعبئتها. علماً بأن الاستبانة من النوع الذي يعبأ ذاتياً.

الرجاء قراءة المعلومات المرفقة، والتي تخبرك أكثر عن الدراسة. وإذا كان لديك أسئلة أخرى فلا تتردد في الاتصال بي.

وشكراً لمنحي هذا الوقت

المخلص لكم

الباحث **توقيع المشارك**

بشير الحجار

جوال: 059 9221984

البريد الالكتروني: bashir.alhajjar@students.wits.ac.za

APPENDIX (9)

The Questionnaire (in Arabic)

بسم الله الرحمن الرحيم

الأخ الكريم .. الأخت الكريمة .. حفظك الله،،،

السلام عليكم ورحمة الله وبركاته .. وبعد،،،

أمامك اختبار يهدف إلى التعرف على "الاحتراق المهني لدى ممرضي وممرضات المستشفيات في محافظات غزة" .. أرجو التكرم بالإجابة على فقرات الاختبار بصراحة وصدق، علماً بأن إجابتك موضع سرية ولا تستخدم إلا للدراسة العلمية فقط.

بشير الحجار

Bashir.AlHajjar@students.wits.ac.za

1. الجنس : ☐ ذكر ☐ أنثى

2. عمرك بالسنة: .....

3. الحالة الاجتماعية: ☐ أعزب/ة ☐ متزوج/ة ☐ مطلق/ة ☐ أرمل/ة

4. أعلى درجة علمية حصلت عليها: ☐ دبلوم سنتان ☐دبلوم 3 سنوات ☐ بكالوريوس ☐دبلوم عالي ☐ماجستير أخرى (أذكر).....

5. عدد سنوات الخبرة كممرض/ة: ☐ 1-5 سنوات ☐6-10 سنوات ☐ 11-15 سنة ☐ أكثر من 15 سنة

6. هل تعمل ساعات إضافية؟: ☐ نعم ☐ لا إذا كان الجواب بنعم أذكر عدد الساعات أسبوعيا:.....

7. القسم الذي تعمل فيه: .....

8. عدد المناوبات الليلية التي تقوم بها شهريا: .....

9. الأجر الشهري (إن أمكن): بالشيكل: ..... أو بالدولار:.....

10. إذا دلت إجابتك على وجود احتراق مهني كبير، هل ترغب في المشاركة في برنامج لتقليل مستوى الاحتراق؟ ☐ نعم ☐ لا

الرجاء إجابة الأسئلة من 1-22 من خلال وضع دائرة حول الإجابة التي تعتقد أنها الأقرب لك (0-6)

م.	كم غالبا تشعر بهذا الشكل	أبدا	مرات قليلة بالسنة	مرة بالشهر	مرات قليلة بالشهر	مرة بالأسبوع	مرات قليلة بالأسبوع	كل يوم
1.	أشعر باستنزاف انفعالي بسبب عملي في مجال التمريض	0	1	2	3	4	5	6
2.	أشعر مع نهاية الدوام باستنزاف طاقاتي في العمل	0	1	2	3	4	5	6
3.	أتضايق في كل صباح عندما أرى لزاماً علي الذهاب للعمل	0	1	2	3	4	5	6
4.	أتفهم مشاعر المرضى نحو كثير من الأمور بسهولة	0	1	2	3	4	5	6
5.	أشعر بأنني أتعامل مع المرضى على انهم أشياء لا مرضى	0	1	2	3	4	5	6
6.	حقاً إن التعامل مع المرضى طوال يوم العمل يسبب لي الإجهاد والتعب	0	1	2	3	4	5	6
7.	أعمل بفاعلية فيما يتعلق بمشاكل المرضى	0	1	2	3	4	5	6
8.	أشعر انني أحترق نفسياً بسبب ممارستي للعمل في مجال التمريض	0	1	2	3	4	5	6
9.	أرى أن لي حضوري وتأثيري في الآخرين بسبب عملي في مجال التمريض	0	1	2	3	4	5	6
10.	ازداد إحساسي بالقسوة تجاه الناس بعد أن أصبحت ممرضاً / ممرضة	0	1	2	3	4	5	6
11.	أشعر أن لعملي في مجال التمريض أثراً بارزاً في قسوة عواطفي	0	1	2	3	4	5	6
12.	أشعر بدرجة عالية من النشاط والحيوية أثناء عملي	0	1	2	3	4	5	6
13.	يلازمني شعور بالإحباط بسبب عملي كممرض/ ممرضة	0	1	2	3	4	5	6
14.	أدرك مستوى الإجهاد الذي أعانيه بسبب عملي في مجال التمريض	0	1	2	3	4	5	6
15.	لا أكترث لما يتعرض له المرضى من مشاكل	0	1	2	3	4	5	6
16.	أتعرض لغوط حادة بسبب عملي في مجال التمريض	0	1	2	3	4	5	6
17.	أملك القدرة على خلق أجواء نفسية مريحة وسهلة مع الآخرين	0	1	2	3	4	5	6
18.	سعادتي تتجلى في عملي عن قرب مع المرضى	0	1	2	3	4	5	6
19.	أعتقد انني استطعت تحقيق أشياء هامة في مجال عملي في التمريض	0	1	2	3	4	5	6

.20	هناك إحساس يراودني بأنني على شفا الهاوية بسبب العمل في مجال التمريض	0	1	2	3	4	5	6
.21	أواجه بهدوء المشاكل الانفعالية والعاطفية أثناء العمل	0	1	2	3	4	5	6
.22	يوجه المرضى لي اللوم فيما يختص بمشاكلهم	0	1	2	3	4	5	6

APPENDIX (10)

Ethical approval-University of Witwatersrand

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Mr Bashir Alhajjar

CLEARANCE CERTIFICATE	**M10649**
PROJECT	A Programme to Reduce Burnout among Hospital Nurses in Gaza -Palestine
INVESTIGATORS	Mr Bashir Alhajjar.
DEPARTMENT	Department of Nursing Education
DATE CONSIDERED	25.06/2010
DECISION OF THE COMMITTEE*	Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 27/09/2010 **CHAIRPERSON** .....
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable
cc: Supervisor : Dr G Langley

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...

APPENDIX (11)

Letter of permission-Palestinian Ministry of Health

Palestinian National Authority
Ministry Of Health
NURSING UNIT

السلطة الوطنية الفلسطينية
وزارة الصـــــحة
وحـــدة التمـــريض

Date : 28/09/2010

السادة مدراء التمريض في المستشفيات المحترمين

السلام عليكم ورحمة الله وبركاته

الموضوع: مساعدة الباحث بشير الحجار

تهديكم وحدة التمريض أطيب تحياتها ... وترجو من سيادتكم التكرم بالعمل على تسهيل مهمة الباحث أ. بشير الحجار في بحثه للحصول على شهادة الدكتوراه من جامعة " Witwatersrand" وعنوان البحث "A programme to reduce burnout among hospital nurses in Gaza-Palestine"

آملين حسن تعاونكم معه

ودعواتنا له بالتوفيق والنجاح

وتفضلوا بقبول فائق التقدير و الاحترام،،،

أ. خليل مصطفى شقفة
مدير وحدة التمريض

خليل مصطفى شقفة
مدير وحدة التمريض - وزارة الصحة
Khalil M. Shaqfa

وزارة الصحة الفلسطينية
وحـــدة التمريض
صادر
رقم: ٢٠٤٨.....
التاريخ: ٢٨ / ٩ / ٢٠١٠

Palestinian Ministry Of Health - Nursing Unit
وحـــدة التمريض

فلسطين – غزة – شارع العيون – مجمع النصر الطبي هاتف : 2879851 8 970+ فاكس : 2879844 8 970+
Website: http://www.moh.gov.ps/nursing Email: nursing@moh.gov.ps
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