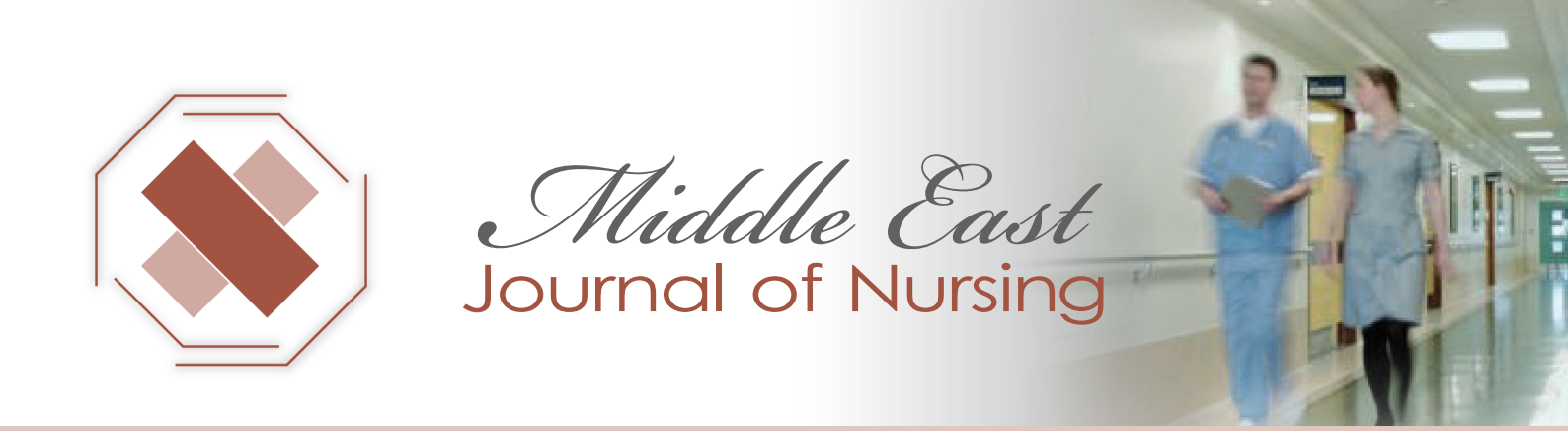

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FROM THE EDITOR

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The papers in this issue deal with nursing education and chemotherapy management in nursing. A paper discussed the Mentorship Teaching In Clinical Teaching of Nursing. A clinical learning environment forms an integral part of student nurses' learning experiences, both personally and professionally, enabling them to move towards achieving a high level of competence during their professional career. Nurse educators aim to assist student nurses to integrate the theories learnt in the classroom to relevant clinical situations in order to enhance the quality of health care delivery results. This paper aims to highlight mentorship through a literature review, and a discussion of teaching theories which are utilized in this important ro. In addition, this paper examines the literature associated with the supervision of student nurses literature review regarding clinical and focuses on the nature and practice of mentorship in practice settings. Also, a brief literature review regarding clinical teachers as mentors in nursing is included along with a discussion of the advantages and disadvantages of this. The clinical teaching method will be related to behavioral theory and will be evaluated from a mentor's perspective.

A policy paper from Jordan looked at Chemotherapy Spills Management Policy. Chemotherapeutics agents are therapeutic agents which are known to be toxic to cells through their action on cell reproduction and are primarily intended for the treatment of neoplastic disorders, as more and more chemotherapy is given in outpatient clinics and at home, it is extremely important that caregivers and patients understand the risks and hazards that household members may be. Accidental spill of chemotherapy agents may occur during manufacture, transport, distribution, receipt, storage, preparation, and administration, as well as during waste handling and equipment maintenance and repair. As oncology nurses should receive specific training which includes principles of chemotherapy administration, safe handling of cytotoxic drugs, classes of chemotherapeutic agents and cell kinetics, anaphylaxis, spill, and extravasation management, management of chemotherapy side effects and patient teaching, use N95 mask to prevent inhalation of chemotherapy, and add put sharp container in case that chemotherapy prepared in glass bottle, how remove the PPE in consequences, and how to clean CTX in case expose the body.

A second paper dealt with the same topic and the authors stated that chemotherapy has an important role in cancer treatment, the National Institute for Occupational Safety and Health categorized chemotherapy as hazardous drugs. Hazardous drugs pose a potential health risk to personnel who prepare, handle, administer, and dispose of these drugs. Chemotherapeutic agents pose any one of the following characteristics: genotoxicity, carcinogenicity, teratogenicity, or fertility impairment, the risk for exposure-related cancers increased in health care workers who handle chemotherapy and in female health care workers who become pregnant; there are also the potential hazards of spontaneous abortions, stillbirths, and teratogenic effects on unborn fetuses. patients receiving chemotherapy and their family members, can also be exposed to the hazards of chemotherapy drugs when they handle contaminated equipment or body fluids, Several studies carried out at hospital units have shown detectable levels of cytotoxic agents in the air, on surfaces, on gloves, and on different parts of the body. The presence of these drugs in the urine of hospital personnel has been widely studied. The authors concluded that it is important for everyone who prepares, handles, administers, and disposes of chemotherapeutic agents to review and analyze the policy of safe handling of cancer chemotherapy drugs and waste.

A paper from Iran examined the effect of Dance/Movement Therapy (DMT) in decreasing levels of aggression and anxiety among children ages 6-7 years old enrolled at four private pre-schools centers in Tehran, Iran by 2013. Dance/ movement therapy (DMT) defined as the "psychotherapeutic use of movement as a process that furthers the individual's emotional, cognitive, social, and physical integration'. DMT can elicit positive change, growth, & health among adults and children. The design of this study was Quasi-experimental pre-post test with control group. Thirty children were select by random method from four private pre-schools in Tehran. Then, 15 children were randomly assigned to experimental group and 15 other children were elected for the control group. The dependent variables, aggression, and anxiety were measured twice throughout the 10-week study. Ten one-hour group DMT sessions were given as the interventions to experimental group. For gathering data they used Children's Inventory of Anger (ChIA) and Spence Children's Anxiety Scale (SCAS). Data analyzed by Analysis of Covariance (ANCOVA). There was a significant difference in aggression and Anxiety scores between the two groups of participants. Experimental group showed lower incidence of aggression and anxiety after DMT intervention. The findings of this research suggest DMT can be beneficial for all children with Anger and Anxiety. In addition, DMT can provide a sense of safety, self- awareness, other or people mindfulness, and mental health for children.

MOVING TOWARD INTEGRATION: GROUP DANCE/MOVEMENT THERAPY WITH CHILDREN IN ANGER AND ANXIETY

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Abstract

Background: Dance/ movement therapy (DMT) is defined as the "psychotherapeutic use of movement as a process that furthers the individual's emotional, cognitive, social, and physical integration'. DMT can elicit positive change, growth, and health among adults and children.

Objective: The purpose of this study was to examine the effect of Dance/Movement Therapy (DMT) in decreasing levels of aggression and anxiety among children ages 6-7 years old enrolled at four private pre-school centers in Tehran, Iran in 2013.

Method: The design of this study was Quasi-experimental pre-post test with control group. Thirty children were selected by random method from four private pre-schools in Tehran. Then, 15 children were randomly assigned to the experimental group and 15 other children were elected for the control group. The dependent variables, aggression, and anxiety were measured twice throughout the 10-week study. Ten one-hour group DMT sessions were given as the interventions for the experimental group. For gathering data we used Children's Inventory of Anger (ChIA) and Spence Children's Anxiety Scale (SCAS). Data was analyzed by Analysis of Covariance (ANCOVA).

Results: There was a significant difference in aggression and anxiety scores between the two groups of participants. The experimental group showed lower incidence aggression and anxiety after DMT intervention.

Conclusion: The findings of this research suggest DMT can be beneficial for all children with Anger and Anxiety. In addition, DMT can provide a sense of safety, self-awareness, other or people mindfulness, and mental health for children.

Key words: Dance/movement Therapy (DMT), Aggression, Anxiety, Pre-school children

Background

The American Dance Therapy Association defines dance/ movement therapy as the "psychotherapeutic use of movement to further the emotional, cognitive, physical, and social integration of the individual" (1). American Dance Movement therapy points out the benefits of DMT as "There is a variety of goals and techniques and activities used in individual and group DMT sessions, including; movement behavior, Expressive, communicative, and adaptive behaviors are all considered for group and individual treatment. Body movement, as the core component of dance, simultaneously provides the means of assessment and the mode of intervention for dance/ movement therapy. DMT is useful for mental health, rehabilitation, medical, educational, and forensic settings, and in nursing homes, day care centers, disease prevention, health promotion programs and in private practice. DMT is effective for individuals with developmental, medical, social, physical, and psychological impairments.
In addition, DMT is used with people of all ages, races, and ethnic backgrounds in individual, couples, family, and group therapy formats"(1). Schmais (1985) looked at factors within group dance/movement therapy that elicit positive change, growth, and health in its participants. Factors that can be seen in typical group dance therapy sessions include synchrony, expression, rhythm, vitalization, integration, group cohesion, education, and symbolism (2). There have been bodies of researches done to examine the effects of Dance/ Movement therapy for children. For example, Leventhal discussed DMT for the special needs child. DMT could be beneficial indirectly for Special children and create a new chance for them to learn new skills and modify their patterned behaviors (3). In addition, Shennum (1987) found out that the

children who received DMT sessions had lower levels of emotional unresponsiveness and negative acting out (4). Throughout the literature review there have been implications that Dance/Movement Therapy (DMT) has an impact on mental health of children who present with various issues, including severe trauma (5), depression, attention deficit hyperactive disorder (ADHD), conduct disorder, as well as psychosis, anxiety, and post-traumatic stress resulting from physical and sexual abuse (6 & 7). DMT was also found to have impact on children in struggle with communication and motor skills (8), victims and children who were soldiers and torture survivors (9 & 10). DMT education for clinical staff examined by Lundy & McGuffin (11) has been shown to have a positive effect on therapeutic holding with children in an in-patient setting. Capello argues the effect of dance/movement therapy in reviews of cross-cultural study by literature; the literature implies it has influenced children's development issues surrounding differences in child rearing and children who have been survivors of war and torture (12).

Dance/Movement Therapy has been used as a tool to address aggression and empathy; the curriculums have been utilized in public schools as a preventative measure (13 & 14), in a multi-cultural school setting (15), and in a residential treatment program for emotionally and behaviorally disturbed children with histories of abuse and/or neglect (4).

In some countries around the world, dance/movement therapy brings a new opportunity for therapeutic and education methods for clinicians and staff (Capello, 2008). In Iran Dance/Movement Therapy is not approved as a formal therapeutic adjunct or the curriculum in school settings. While, in Iran some private pre-schools are using DMT for helping children with hyperactive behaviors.

Objective

In this study, we examine the effect of Dance/ Movement Therapy (DMT) as a new adjunctive therapy to help children with aggression and anxiety in Tehran in2013.

Method

1. Participants and plan:

The design of this study was Quasi-experimental pre-post test with control group. Thirty (6-7years old) children were selected by random method from four private pre-schools in Tehran by 2013. Then, 15 children were randomly assigned to the experimental group and 15 children were elected for the control group. The dependent variables, aggression, and anxiety were measured twice throughout the 10-week study. Ten one-hour group DMT sessions were given as the interventions to the experimental group. The DMT sessions were described in Table 1.

For Children to be eligible for this study they must

1) Have been between the ages of 6-7 years old
2) Have been identified by their primary therapist to address continuous serious aggressive behaviors and anxiety
3) They have not suffered severe physical disability
4) Carry a diagnosis of at least one of the following: Attention Deficit Hyperactive Disorder (ADHD), Oppositional Defiant Disorder (ODD), Anxiety Disorder, or Learning Disorder NOS
5) They have normal IQ
6) Be assigned to the identified pre-school centers in Tehran

Subject Exclusion Criteria

Children may not be enrolled in this study if they

1) Were not enrolled at the identified pre-schools
2) Were not assigned to the designated classroom
3) Were younger than 6 years old or older than 7 years old at any time from the onset of the study to the end of data collection.
4) Carried a diagnosis on the Autism spectrum, Pervasive Developmental Disorder (Asperger's Syndrome, Childhood Disintegrative Disorder, or Rett's Syndrome), or Mental Retardation may not participate in the study.
5) They suffered severe physical disability.

2. Measurement:

Participants responded to two questionnaires including; Children's Inventory of Anger (ChIA), and Spence Children Anxiety Scale (SCAS).

Children Inventory of Anger (ChIA):

The Children's Inventory of Anger is a 40-item child self-report rated from 1 (no anger) to 4 (extreme anger) for children 6-16 years old. This questionnaire made by Nelson and Finch (1993) and was reviewed in 2000. Children are asked to evaluate their response to potentially provoking events (e.g, ''someone cuts in front of you in a lunch line''). Although the Children's Inventory of Anger has not been used in studies of parent management training, it has demonstrated sensitivity to change in psychosocial interventions with children (Nelson and finch, 2000). The ChIA includes subtests and scores in the following areas: Frustration, Physical Aggression, Peer Relationships, Authority Relations, and Inconsistent Responding Validity Index. The test-retest reliability was Pearson's product-moment correlation coefficient (r= 0.63 to 0.90) and internal consistency was good (α = 0.96) (16). Validity for the measure is supported in its correlation with peer ratings of anger (17).

Table 1: Dance/movement therapy sessions

Session 1	Create the integration in time and space	Trainer sang a song and when she stopped the song, children stopped and were quiet.
Session 2	Reinforcement collaboration	Trainer sang a rhythmic song with cooperation contents and children tried to imagination and repeated the movements of song.
Session 3	Body boundaries	Trainer asked children to shake hands, and feet and then circle and stop in his/her place.
Session 4	Enforcement Concentration	Trainer asked children to listen to music and try to create new movements
Session 5	Increasing Auditory	Trainer asked children to imagine birds are flying in sky and then try to fly like birds openly and feel a sense of freedom
Session 6	Body reactions	Trainer sang a song and asked children to stop with the arms and feet open and then close without taking somebody's place
Session 7	Increasing the creations	Trainer asked the children to listen to the music and create their own movements after the music stopped; children can continue the movement.
Session 8	Reinforcement memories	Trainer asked one child to dance with music. then stopped the music and asked other children to repeat her/his movements.
Session 9	Rhythms for relaxation	Trainer asked children to lie down in the ground and listen to calm music and breathe deeply.
Session 10	Cohesion	The trainer asked children to sit down on the ground and shake their hands like sea waves.

- Trainer ended every session with snacks and talking about the session.
- All sessions were performed by Dance/Movement trainer.

In Iran Children Inventory of Anger was translated to Persian by researchers in this study and the test-retest reliability was Pearson's product-moment correlation coefficient (r= 0.65 to 0.75) and internal consistency was good (α = 0.86).

Spence Children's Anxiety Scale (SCAS):

The Spence Children's Anxiety Scale created by Spence (1998) is a self-report measure of Anxiety originally developed to examine anxiety symptoms in children aged 8-12 years. The SCAS consists of 44 items, 38 of which assess specific anxiety symptoms relating to six sub-scales, namely social phobia, separation anxiety, panic attack/agoraphobia, obsessive-compulsive disorder, generalized anxiety and physical injury fears. The remaining six items serve as positive ''filler items'' in an effort to reduce negative response bias. Respondents are asked to indicate frequency with which each symptom occurs on a four-point scale ranging from Never (scored 0) to Always (scored 3). A total SCAS score was obtained by Sum scores of the 38-anxiety symptom items. Previous studies have demonstrated high internal consistency, high concurrent validity with other measures of child and adolescent anxiety, and adequate test-retest reliability for total score (r= 0.92)(18). In Iran SCAS was translated to Persian by Mosavi et al (2007) with adequate test-retest reliability for total score (r= 0.89) (19).

3. Procedure, statistical methods, and code of ethics:

Participants answered all of the questionnaires independently under supervision of interviewers and parents filled out with informed consent.

When participants were selected, researchers were told the aim of the study to children and their parents and asked the children to answer the questionnaires. For filling out the questionnaire, reviewers read the questions one by one and marked the questionnaire, because children could read and write independently.

The data gathered from research was analyzed by Descriptive statistical methods including; Mean, Standard deviation, and percent frequency. In addition, inferential statistical methods like, Analysis of Covariance (ANCOVA) implemented for research. Data was analyzed by SPSS statistical package version 18.

Results

Table 2, shows the difference between mean score of Children Inventory of Anger (ChIA) overall score in the two groups with ANCOVA. Results of the Children Inventory of Anger (ChIA) is shown in Table 2. Dance / Movement Therapy (DMT) intervention in the treatment group decreased the level of Anger (68.20 ± 13.23 vs. 96.23 ±16.02; p=0.0001).

The results showed no significant differences between the mean ChIA in pre-test scores. Rather, differences in the mean scores of the ChIA in the two groups were significant after intervention (p=0.0001), as confirmed by ANCOVA (p=0.0001; Table 2).

Results of the Spence Children Anxiety Scale (SCAC) presented in Table 3. Dance / Movement Therapy (DMT) intervention in the treatment group decreased the level of Anxiety (58.20 ± 8.58 vs. 69 .72± 7.075; p=0.0001).

Discussion

The present research shows that Dance/Movement Therapy has a beneficial effect in children with Anger and Anxiety. The DMT sessions can reduce the levels of aggression among pre-school children. This result was consistent with the previous study, as an example; Lanzillo (14) found that DMT decreased the level of aggression and increased the empathy in children. In addition, Lanzillo cited that DMT could be used as curriculum in schools to improve the social skills and empathy in children and prevented behavioral problems in children. Furthermore, Hervey and Kornblum (13) implemented the mixed-method of Dance/ Movement therapy for children at-risk. Results showed that behavioral problems had dramatically reduced in children. In addition, in 2004, Koshland and Wittaker evaluated the peace through the Dance/ Movement therapy (DMT) program, created by Lynn Koshland. The program was designed for violence prevention with multi-cultural elementary school students. The results revealed that the levels of aggression, and disruptive behaviors had decreased, while, self-control among children who received the DMT intervention had improved (15).

Caf, Krofic & Tacing (1997) examined the use of creative movement and dance on children with struggles with communication and self- awareness and expression of their feelings. They found that the movement and dance could be helpful for children participating in the research. Teachers reported that children became more expressive of their feelings and more active (8).

There are several activities and modules applied in individual and group Dance/movement therapy (DMT) sessions, including Role-playing, the use of imaginative play, and structured and non-structured movements (14).

As Leventhal (1980) noted Dance/ Movement Therapy (DMT) can indirectly teach. The Children are participating in DMT activities; they are more receptive to learning new skills and changed their behaviors (3).

In conclusion DMT sessions can be beneficial for all ages from children to aged people. DMT can improve positive coping skills, impulse control, and self- esteem; bring social support and interactions, self-awareness, improve body language, body boundaries, in addition, to building empathy and ability to form healthy relationships with others (14). DMT is used in Iran as an informal program in pre-schools but researchers suggest that DMT and Rhythmic Movements can be seen as a new curriculum program for creating a new chance for children to explore their own life through movements.

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Table 2: Differences between mean score of Children Inventory of Anger (ChIA) overall score in the two groups with ANCOVA

Group	N	Mean±SD	f-test	*P* value
Pre-test Experimental	15	97.46 (15.69)	3.202	0.20
Control	15	97.00 (16.14)		
Post-test Experimental	15	68.20 (13.23)		
Control	15	96.23(16.02)	57.421	0.0001*

Abbreviations: SD, Standard Deviation; f, F-test

Table 3: Differences between mean score of Spence Children Anxiety Scale (SCAS) overall score in the two groups with ANCOVA

Group	N	Mean±SD	f-test	*P* value
Pre-test Experimental	15	70.27 (10.09)	4.202	0.27
Control	15	71.05 (9.02)		
Post-test Experimental	15	58.20 (8.85)	61.432	0.0001*
Control	15	69.72 (7.075)		

Abbreviations: SD, Standard Deviation; f, F-test

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CULTURAL VIEW OF NURSING IN SAUDI ARABIA

Abstract

Background: **Modern nursing in Saudi Arabia is a complex issue in which cultural diversity presents the major challenge to the evolution of Saudi nursing as an independent indigenous professional workforce. Historically, patients and the nurses in Saudi Arabia come from different linguistic and cultural backgrounds with the reliance on a predominantly foreign nursing workforce, resulting in culturally based conflicts.**

Aim: **This report opens a window into Saudi Arabian nursing practice in action for international readers, through which the complexities of the problems from a Saudi standpoint are presented.**

Discussion: **Literature shows misunderstandings and conflicts with patients through the lack of cultural skills in how to interact with them in a culturally appropriate manner which can give rise to conflicts and tensions. These can endanger patient care and increase the risk of errors, the consequences of which could prove fatal.**

Recommendation: **Care should be taken during the processes of recruitment and orientating foreign nurses practising in Saudi Arabia. Cultural sensitivity of the nursing cultural requirements needs to be enhanced by the development of educational protocols for cultural competency for all nurses.**

Conclusion: **The distinctiveness of the culture of the Saudi Arabians and the control by foreigners with scant knowledge about their culture, heightens the challenges of providing nursing care that is culturally proficient. Nurses should understand and acknowledge variations that define patients from different cultural settings. If nurses have a good grasp of the cultural attributes of their clients, then they are well placed in caring for them.**

Key words: **culture, nursing practice, Saudi Arabia, diversity**

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Introduction

Contemporary healthcare is undergoing many changes and challenges that include social, technological, consumer demands and increasingly complex bioethical dilemmas. Such environments demand that nurses be educationally prepared to meet the needs of people from different backgrounds to deliver optimum quality of care (1). Diversity within particular work places is no exception. Clients and patients most likely act, as well as think differently compared to their nurses. In Saudi Arabia (SA), a culture influenced by Islam, there are particular challenges because the nursing workforce is predominantly foreign (2).

There are significant dimensions of culture that impact on nursing practices in SA. Understanding these facets of culture during the delivery of nursing services may aid nurses in establishing and growing stronger linkages with their patients, as well as de-escalating possible conflicts attributable to cultural differences. Such culture-related misunderstandings at times colour how Saudi Arabian patients relate with foreign nurses, especially those from the West. If nurses have a good grasp of the cultural attributes of their clients, then they are well placed incaring for them (Aldossary et al. 2008, Almalki et al. 2001 Eliasson et al. 2008). (3-5)

This discursive paper explores the history of nursing in Saudi Arabia and examines dimensions of culture in the society and its effects on nursing practice in health care facilities.

Culture in Saudi and its impact on Healthcare

Saudi Arabia is a young country which was unified in 1932. Since then, the population has rapidly increased and so have the demands for health care, and in particular the roles for professional nurses (6). Like many other disciplines in Saudi Arabia, the health care sector has undergone many changes due to social, technological, governmental, economical changes, and customer-related demands. These rapid changes have direct effects on the nature of health care delivery, such as hospitals and the healthcare environment. As is known, the healthcare environment is complex since it gathers many different groups under an intricate organisational structure. Saudi Arabian hospitals in particular are extremely complex, being reliant on a dominant international nursing workforce. These complexities, along with increasing demands and shortfalls in staffing, can create grounds for conflict among health care professionals (7). Similar to the Saudi health care structure, El-Amouri and Neill (8) assert that the United Arab of Emirates (UAE) is a highly multicultural community consisting of 25% Emirates and 75% expatriates. Such diverse contexts hold risks for many delivering health care, especially for nurses who communicate and interact with patients from different linguistic and cultural backgrounds. Staff are expected to know the meaning and practice of diverse culture, and practise in a culturally sensitive way.

Cultural Values

Leininger (9) describes cultural care as being holistic and respectful of differences and similarities of values, beliefs and lifestyles. Additionally, culturally competent nursing care is "sensitive" to matters of culture, race, gender, sexual orientation, economics and social class. Pickrell (10) stated that "cultural shock is a common phenomenon and occurs when nurses care for patients from cultures different from their own" (p. 130). These issues, if left unresolved, may leave nurses exposed to the risk of making errors, either minor or serious. Westerners and Arabs share many values such as having strong family relationships, the importance of children and the goal of having a peaceful life. However, in health care, due to differences in culture, background and traditions, many conflicts may emerge.

Lack of cultural awareness, lack of communication and language barriers have major impacts on the delivery of hospital-based health care. El-Amouri and Neill (8) discussed examples of ways that cultural sensitivity may alter the care-giving process. A health care worker may make an error in examination due to limited physical contact because of cultural and language barriers, which may affect the quality of care. For example, some cultures alter the care planning process; a patient may not understand the complications of either discontinuing medication, or having an early discharge just because they are feeling better, or refuse admission for cultural reasons. For example, in SA as a Muslim community, aside from medical intervention, suffering is considered a test from God "Allah" and one's task is to endure it and not lose faith. In Western communities, on the other hand, this matter is faced with further discussion and other options, such as euthanasia, may be considered (11). Other reasons affecting health care delivery have been connected to healthcare workers' cultural insensitivity, patients' social status, patients' inability to afford health care, and unavailability of services compatible with diverse groups (8). Underutilisation of health care services by different cultural groups have been identified across the globe; for instance, for African Americans, people of colour in Canada, refugees in Australia, and indigenous people.

Gender

In the Middle East, gender segregation is socially allowed, sanctioned, and actualized through varied structures of governments. In open or public spaces such as hospitals and their wards, for instance, different genders cannot intermingle. In such spaces there are varied physical environments that are zoned out for females, families, and males. Women, including female nurses, cannot work alongside or interact with male nurses in a majority of settings, except when it is absolutely essential (12-14).

Commonly, women are allowed into careers such as teaching, social work, banking, nursing, and in developing and building the capacity of other females. However, in SA they cannot drive or ride alone and hence, are wholly dependent on males for their transportation requirements. Males are charged with offsetting their family fiscal requirements even where their spouses are employed. This is so except when mutual decisions are made concerning alternatives to allow for concession. However, females are permitted to set up and manage their own enterprises, invest any resources they have and possess property (3-5).

Like most places in the world, the majority of nurses in Saudi Arabia are female, perhaps more evident because of the segregated systems of education. These systems allow only for limited female and male socialization, and subsequently a number of Saudi nurses elect not to offer care to sick males. Largely, patients are cared for by nurses of their gender (3-5). However, where there are significant shortfalls of nurses, nurses from both genders might be assigned to care for patients of either gender. The involvement of female nurses in nursing practice is thus limited, as the nature of the job will always necessarily be mixed-gender (12-14).

Family Approval and Support

In Saudi Arabian society, families are central. Families are of an extended nature, with each individual being part of a family that includes cousins, parents, siblings, grandparents, uncles, and other relatives. Families are considered the framework of the identity of individuals. Saudi culture seeks to preserve and strengthen family linkages by paying visits, celebrating others' attainments, supporting and having compassion for them and respecting all. In urban environs, relatives often reside close to one another, promoting family socialization (3-5). This means that nurses can amply engage family members in offering care to their relatives. Grandparents as well as parents are highly respected and wield significant authority when it comes to their offspring's health and healthcare. This authority impacts on how nursing services are provided. In the case of elderly patients, they expect to be treated in a similar manner to how they are treated at home. They expect nurses to be humble, patient, gentle and softly spoken towards them. Family members expect that the nurses who offer services to their family members be appropriately and conservatively dressed, to be reserved as opposed to being outgoing and wary of making uncomfortable disclosures which may injure the honour of the patient (7, 15-18).

In Saudi society, tarnishing an individual's honour is equated with tarnishing the honour of her or his entire family. This phenomenon is widely applied in other Arabian and neighbouring communities. Aspects that are closely linked to dishonour include mistreating the elderly or the weak, meanness and sexually-related immorality and indecency. Discussions relating to the demise and/or ill health of Arabs are unavoidably focused on families. The needs-based affiliations of Arabs intensify when their relatives are ailing (12-14). Patients are often accompanied by several relatives whose expectations include being present when the diagnosis or related interviews take place. Relatives listen keenly and commonly respond on behalf of the patient and the elderly may feel slighted by nurses who fail to usher them into the offices of physicians (19-21).

Elders suppose it is their duty to accompany their close relatives in all the phases of their ill health as a sign that they care for them. Families insist, or demand, that patients get the best nursing care and demanding characteristics are cultural prescriptions that show the care that a family holds regarding their sick members (3-5). Expectedly, families demonstrate remarkable concern by always offering company to the sick and continually showing them care and attention. Most Arabs need to be affiliated to, celebrated and appreciated by their families and they appreciate immense repertoires of family ties and relations in satisfying their affiliation-related needs (19-21). During crises or sickness, Arabs substantially rely on relational ties, as opposed to coping in other ways. Patients who do not receive adequate family support through frequent and sustained visits in the course of their illness, are commonly lonely and may feel rejected and isolated from their relatives. The involvement of caring friends along with family is linked to doubts and mistrust regarding other people's intentions, including nurses (3)(4, 5).

Others, including nurses, are viewed by patients as being outsiders in relation to their close circle of friends and family members. Many challenges that colour the relationships of nurses and patients in Saudi Arabia gradually dissolve if nurses are allowed membership in family systems. This approval allows nurses to combine authority and expertise with individual warmth as they attend to patients. Such a combination engenders more trust, compared to purely professional approaches (3-5). Most Saudis grow trust in a nurse if she or he demonstrates competence when caring for their relative. Trust also increases if families get personally, and not professionally, acquainted with a given nurse. Nurses find it helpful to offer individual information to families for purposes of increasing their trust in them and their practice. A nurse should readily respond to families' questions, even personal ones. Withholding a response might prompt families to withhold essential health-related information (3-5).

Nursing Education in Saudi Arabia

Nursing education was initiated in 1958 in Riyadh, the capital city, with fifteen Saudi males enrolled in a one-year nursing program (3). A few years later similar programs were offered for women in Riyadh and Jeddah. By 1981, admission criteria for nursing courses had risen from fifth and sixth grade to ninth grade entry level as the program curriculum had expanded into a three-year program. The Bachelor of Science in Nursing (BSN) was introduced to Saudi Arabia in the late 1970s, followed by the establishment of masters programs in 1987 (22, 23). All early BSN programs were exclusively for females. The first male BSN program was reported in 2006 with 307 students enrolled in a four-year academic program in Riyadh (2). With Saudi hospitals built on Western models, health care facilities and related educational institutions are becoming more westernised. It has become clear that one of the issues facing nursing education in the Arabian region is recognising how cultural bias is embedded in textbooks used within the courses. Even though textbooks reflect the importance of cultural diversity as a value, those available strongly reflect Western culture (11).

As opposed to other professions, such as teaching, which are stringently segregated on the basis of gender, nursing entails working closely with patients, doctors and individuals of the opposite gender. This has added to speculations among families that nursing should not be welcomed as an occupation with pronounced tendencies of directing their members towards more professionally and socially celebrated careers such as medicine, albeit still involving contact with the other gender. Female nurses are seen as being markedly vulnerable to risking

their own reputation, as well as jeopardizing the social standing of their family (24). However, nursing roles for women have historical Islamic roots. From the eighth century during the early ages of the prophet Mohammad, women were a part of the Muslim army body as nurses to treat the wounded in tents. Rufaidah Bint Sa'ad Al-Ansareyah is recognised as the first Muslim professional nurse, who later had established the first nursing school to teach volunteering women nursing skills and how to care for the ill (25).

Although nursing education in Saudi Arabia, and in the Middle East in general, has gone through major developments, it is still a profession with societal and cultural stigmas (23). Another source of conflict is that in SA female nurses must have their applications for employment approved by their male custodians, the "mahrams". Such approval processes place females at the mahrams' mercy. At times, the mahrams have been reported to react violently if nurses work night shifts, render care services to males, or attend to weekend assignments in the workplace (3-5).

Like Saudi Arabia, Qatar is a tribal society and cultural norms and social status have been noted as having a major impact on the education process (11). For example, these factors may contribute to acute discomfort for individuals exchanging feedback, even if it includes constructive criticism, and it would be difficult to give negative comments to a person with a high social status. These cultural differences have significant implications for the models of nursing education.
In the United States of America, it is an essential requirement that baccalaureate nursing graduates have the knowledge and skill to care for diverse populations. This demands knowing and understanding the effects of culture, race, age, gender, religion, and lifestyles on health and methods of care delivery (1). It is critical to involve health care workers because they are at risk of experiencing cultural shock and consequent stress and conflict.

Conflict

Conflict within an organisation comes in four forms: interpersonal, which is created within the individual; intrapersonal, which occurs between two or more individuals; intergroup/ support, which occurs between two or more groups who are supportive at work while having differences in competing for power, resources, and status; and intergroup/ other departments, which occurs between two or more groups for resources and services and where the conflicts are centred around control and might be competitive (26). Conflict among nursing professionals has been seen to drain energy, cause discomfort and hostility and produce confusion (7).

Conflict caused by cultural insensitivity can take many forms. El-Amouri and Neill (8) highlight factors that hinder culturally competent care between patients and healthcare workers. These include lack of understanding of other cultures; stereotyping; lack of effective communication; nurses' own linguistic and diverse backgrounds; and the health care organisation's poor design to support culturally diverse patients. Generally, in the Middle East, nursing practice lacks professional regulation. Therefore, institutions tend to create their own policies on the roles of nurses and nursing practice, hence, hospitals may handle issues differently from one another (27).

Teamwork and Peers

Nursing assignments carried out by teams in SA often suffer from the social segregation of sexes. In SA, teams should comprise individuals of the same sex, as strict separations are maintained between genders. When engaging their peers at the workplace, nurses of Saudi extraction have been reported to respond to their minority statuses in varied ways (12-14). They may work harder so as to earn recognition comparable to those given to nurses from dominant racial backgrounds. At times, Saudi nurses prefer being away from the limelight and many seek to conceal their attainments. Foreign nurses often view their Saudi peers as irresponsible or spoilt, as they often place requests to be assigned to daytime shifts, flexible arrangements for working, and frequent leave to handle family commitments (3-5).

Multicultural Workplace

As noted earlier, globally, there is a shortage of nurses. In some countries the shortage has been occasioned by the desire of nurses to seek jobs abroad, where they are sure of better working conditions and compensation. The movement of nurses from one cultural setting to another affords them multicultural experiences (24). However, such experiences can colour the lives of nurses in Saudi Arabia where most nurses are from Western cultural backgrounds. Nurses working there can be confronted with a variety of problems relating to customs, healthcare-related practices, language, and communication (12-14).

In SA, a nursing career is not considered as desirable as other professions. Poor perceptions about nursing in the region, gender-related restrictions, and a sustained population expansion have heightened the dependence on foreign nurses. In 2011, more than two thirds of the nurses offering services in the country were expatriate (2). Foreign nurses bring with them unique cultural persuasions and ideals. The Saudi authorities source the greatest number of nurses from the United Kingdom, Malaysia, South Africa, Australia, the United States of America as well as immediate neighbouring nations (2). For these nurses, it is almost always certain that varied cultural backgrounds are represented. The professional, social and cultural backgrounds of expatriates are markedly dissimilar to those of native nurses, each other and of their clients. A number of studies have shown

that foreign nurses within the country are confronted by challenges in appreciating and satisfying their clients' cultural needs. They are advised on the helpfulness of employing consulting negotiators of culture in resolving the challenges in offering services to the native patients (3-5).

Variously, negotiators or translators in the work place need not have nursing experience or training. Rather, they should embody wide-ranging experiences of living within the Saudi populace, or have the requisite bi-cultural experiences. These negotiators serve as brokers of cultures, linking distinct subcultures or cultures. They interpret variations in style of communication, languages and preferences of values as well as lifestyles. As interpreters they significantly help in the enhancement of nursing services delivery. While Saudis have remarkable needs related to affiliation, Westerners value individualism and are not as strongly tied to families and networks of relatives (24).

Other aspects and experiences that define multicultural environs, especially in the context of Saudi populations and foreign nurses, relate to appreciation of time, contexts and spaces. The frequency and intensity of their relationships make their culture markedly contextual. They seek to develop meaning out of events by evaluating the circumstances surrounding them in their entirety (12-14). Westerners find Saudis desirous of knowing more regarding a person than a Westerner does, for purposes of establishing relationships. Unlike Saudis, Western nurses place a low value on context; rather, focusing more on the particular happening, message, act, or relation (14).

In terms of time, expatriates find the Saudis less concerned about punctuality (28-31). Patients may come late for a care service or fail to come altogether if other commitments crop up. Westerners generally get annoyed by people who approach time casually, while Saudis may be annoyed by the Westerners' tendency to talk of all essential matters at the earliest possible chance, without developing relationships as a prelude (21). Expatriates may feel that Saudis are invading their personal space when conversing with them, as most Saudis prefer to stand about two feet away from the person with whom they are conversing. This ensures that they can thoroughly discern the other's reactions as the conversation goes along. Westerners prefer a longer conversation gap of around five feet. Saudis also touch others more frequently than Westerners (24).

Saudis, though generally welcoming open communication as well as truth, are averse to communicating openly during crises, severe illnesses, disasters and when there is a looming death. The Saudis' denial, when faced with those matters, is in direct conflict with the Westerners' desire for entire disclosure regarding any information that is regarded fateful (3-5). In Saudi Arabia, denial presents an ethical challenge to all healthcare practitioners, including nurses. Saudis, being Muslim, hold the belief that given the extent to which a diagnosis is severe, mortals should not lose their hope, as a loss of hope means that they have forfeited God's aid. Hope aids patients in coping with and managing ill health, even where such hope is deemed futile, especially in the Western region of the country (21).

Confronting ailing individuals with serious diagnoses is seen as tactless and unforgivable in Saudi Arabia. Patients' relatives serve as their clearinghouses regarding information on diagnoses. Families often intervene, sometimes violently, to ensure that the information is blocked (24). Such interventions are recognized in other countries, such as Jordan and the United Arab Emirates, and do not attract feelings of guilt on the part of concerned families, because they feel justified that they have blocked potential harm that could have been inflicted on their family members (6, 32, 33). Indeed, it is thought that ailing individuals who become privy to their state of malignancy may lose all hope. Commonly, nurses and other healthcare experts communicate serious prognoses tactfully through nonverbal ways. They doggedly regress from verbally uttering fatal findings to patients along with their families (21).

Culture and Competency in Nursing Practice

In the modern world, diversity within workstations is not an exception. Clients and patients most likely act as well as think differently compared to their nurses. They embody wide-ranging cultural identification, material actualities, religions, behaviours, and beliefs that enrich cultural diversity and complexity. Every patient and every nurse is exceptional. The nurse should be competent, in relation to a patient's culture so as to efficiently take care of her or his cultural and other necessities (34, 35). Cultural competence denotes a collection of attitudes, policies, and behaviours that, together, enable nurses and others to work efficiently within transcultural settings.

Such competence incorporates and acknowledges cultural essences and evaluation of cross-cultural relations. It acknowledges the significance of awareness regarding cultural variation dynamics, growth of cultural knowhow, and modelling of services for purposes of meeting special cultural necessities (27, 36-38). Nurses ought to understand and acknowledge the variations that define patients from different cultural settings. Each patient, regardless of the setting, should be offered valuable and compassionate care. In Saudi Arabia, studies have shown that foreign nurses are somewhat devoid of knowledge regarding their cultural considerations and practices relating to the nursing

profession such as, breastfeeding, evil eye, medicine, Ko'hl (a cosmetic similar to an eye liner), food-related taboos, and modesty (24).

These matters can be addressed during the processes of recruitment and orientating foreign nurses practising in Saudi Arabia. This may improve the standard, or quality, of the care they offer Saudi patients. Nurses need to improve their understanding of other cultural matters such as use of herbal extracts by females (12-14). They should have a polished understanding of diseases particular to Saudis, such as their cultural sensitivities relating to caring for expectant mothers as well as children, the males' health-related roles concerning their families, and how placentas are disposed of. In developing culture-related competencies, nurses should examine their own specific cultural persuasions, beliefs about healthcare, prejudices and biases and their origins (34, 35).

To gain knowledge of the culture of clients, nurses can review published literature or attend relevant seminars. The competencies that they attain should include skills relating to the gathering of cultural information about conditions of patients. Nurses should heighten their involvement and engagement in cross-cultural interactions. Additionally, foreign nurses should be devoted to becoming culturally knowledgeable about the Saudis and their patients in particular (3-5).

Conclusion

The distinctiveness of the culture of Saudi Arabians and the control by foreigners with scant knowledge about their culture, heightens the challenges of providing nursing care that is culturally proficient. This paper has discussed the history of nursing in Saudi Arabia and examined the dimensions of culture in the society and how these affect nursing practice in health care facilities.

Nurses need to understand and acknowledge the variations that define patients from different cultural settings. If nurses have a good grasp of the cultural attributes of their clients, then they are well placed in appropriately caring for them.

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MENTORSHIP TEACHING IN CLINICAL TEACHING OF NURSING

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Abstract

A clinical learning environment forms an integral part of student nurses' learning experiences, both personally and professionally, enabling them to move towards achieving a high level of competence during their professional career. Nurse educators aim to assist student nurses to integrate the theories learnt in the classroom to relevant clinical situations, in order to enhance the quality of health care delivery results (Ahren, 2000). Even if technology advances beyond current imagination in the years to come (which may happen with simulation teaching methods) the authenticity and benefits derived from clinical teaching will still be valued (Cant & Cooper, 2010). While students learn important nursing skills in this process, teachers/educators gain knowledge and skills as a result of extensive research on particular subjects. Another aspect of the important role of the clinical teacher is the students' perception of clinical educators as role models. In order to fulfill these roles, that is, to provide higher education and to guide students regarding the implementation of theory in clinical environments, clinical teachers also need assistance and education. Within the nursing context, there remains a gap between the knowledge gained and its application. So it is crucial for clinical teachers to learn effective skills that will facilitate the learning of students in ways that are then converted skillfully in the clinical setting (Brykczynski, 2012). This requires the use of effective methods of teaching. Such knowledge will help clinical teachers evaluate how effectively students are taught, recognize their own teaching weaknesses, and rectify or improve their teaching, based on different theories of clinical teaching (Hallas, 2012).

This paper aims to highlight mentorship through a literature review, and a discussion of teaching theories which are utilized in this important role. In addition, this paper examines the literature associated with the supervision of student nurses and focuses on the nature and practice of mentorship in practice settings. Also, a brief literature review regarding clinical teachers as mentors in nursing is included along with a discussion of the advantages and disadvantages of this. The clinical teaching method will be related to behavioral theory and will be evaluated from a mentor's perspective. In the second part of this assignment, the gap between clinical teaching and clinical practice will be identified.

Key words: **Clinical Teaching; Mentorship teaching; Nurse; Nursing Students; Knowledge; Learning.**

Literature Review

Description of Situation

In their article, Price & Price (2009) discussed practical ways in which the exploration of role model practice is conducted with clinical nurses. In this case, although an attempt is made to increase the knowledge and skills of clinical nurses in dealing with patients through the use of role modelling practice, the results indicate that the practice hasn't been effective. Here the opportunity to learn was not taken advantage of because the strategy doesn't consider the enhancement of the learning process for clinical nurses.

Guided clinical learning experiences are very important in relation to nursing students and their education. The main aim of clinical learning experiences is to prepare student nurses for their contribution towards better health care delivery and outcomes. In this situation, the clinical teacher's/mentor's role is crucial. One cannot define mentoring in one line or in one definition; it is a wide term that includes coaching, teaching and analyzing the work of the person who is under mentorship (Ali & Panther, 2008). The wide range of benefits that it provides makes it popular and in high demand. A mentorship is a kind of relationship between two people where one person is experienced and knowledgeable and the other person is learning. The experienced person helps the learner to understand his role and the responsibilities associated with it. In mentorship, the purpose is made clear and then the procedure is designed to achieve it both in formal and informal ways (Borren et al, 2000).

Advantages

Price & Price (2009) discuss the advantages relating to clinical placements. One key advantage is that the student can work with a professional while investigating the practice. Burns and Paterson (2005) discussed how practical application provides an opportunity for students to learn reasoning and judgment in the

area of clinical nursing. Andrews (1999) conducted a review suggesting that the opportunities for practice development are highly valued by student nurses.

Recently, the focus for mentorship has switched from students to professional nurses. Block et al. (2005) emphasized the advantage of mentorship in increasing the retention rates of nurses in hospitals. Hospitals face many challenges when it comes to retaining nurses because many nurses are dissatisfied with their jobs. Improving nurse retention rates, would, in turn, increase patient outcomes. Research has shown that the implementation of mentorship programs has been proven to be effective in the retention of nurses.

The advantages and the role of mentorship in modern practice related to nursing in the United Kingdom was discussed by Myall et al. (2008), who aimed to identify the impact of nursing education based on locality in the United Kingdom. Their study also took into account the academic staff and and examined similar situations in Australia. The study concludes with a discussion of the perceptions of mentors and student nurses. For nursing students, mentorship is essential and has attracted the interest of a great number of researchers. Although a great deal of research has been conducted on mentorship in the clinical nursing area, very little attention has been paid to mentorship rules and regulating bodies. The study aims to expand knowledge on the regulatory bodies for clinical nursing mentorship programs. The method used in this study is an online survey and a questionnaire for clinical prequalifying learners and for mentors in practice. The findings of this research highlighted the need to provide mentors who are adequately prepared and who can support the mentorship process. Finally, the research concludes with ways by which the gap between reality and theory on mentorship can be bridged, such as identifying the responsibilities and roles relating to the mentor. This would also benefit the development of standards for mentorship for clinical nursing, supporting students in countries which run on similar systems.

The literature review suggests that dealing with problems in rural areas regarding clinical nursing presents many challenges for both managers and policy makers. Hence, the use of programs, including mentorships, perceptoring and clinical supervision are all helpful in dealing with problems in these areas, and may also help in nursing recruitment and increasing retention rates. Furthermore, these programs are also helpful in supporting relationships within organizations. Mentoring, perceptoring and clinical supervision have all been proven to be important for management in meeting the challenges offered in clinical nursing practice and are also vital tools for the future workforce planning process.

The success of mentorship is highly dependent upon the interaction and level of comfort between the person and the environment of the organization where the mentorship is taking place. A mentor has far more responsibility than the mentee. A mentor has to undertake a dual duty, that is provide proper care to the patient as well as proper guidance to the mentee (Clinard & Ariav, 1998). This helps students learn the practice standards in an individualized way (Ali & Panther, 2008) and provides them with the opportunity to build on their knowledge by putting theory into practice, while planning the management of patient problems. In a typical clinical setting, teaching by clinical teachers/mentors occurs by the following process. The student nurse carries out the assessment of a patient and plans interventions after the diagnosis is established. The assessment is presented to the mentor who validates the assessment and plan. Then, it is implemented by the student with support from the mentor. Later, the mentor reflects on the particular case and discusses any future implications.

The mentor, being a teacher, provides constant feedback and evaluates his/her student. The student refines their practice on the basis of knowledge, skills and practice by gaining assistance and support (Li et al., 2011). The mentor/clinical teacher plays an important role in the development of a qualified nurse. Clinical teachers impart knowledge and skills to a whole class, but the scenario differs when they teach and assist one single student. The behavioral theory of learning can be implemented by teachers/mentors and they can change the learning environment for the student in either a positive or negative way (Quinns & Hughes, 2007).

Due to varying degrees of responsibilities, a shortage of time and increasing demand, it is very difficult for mentors to address the individual needs of a student (McCloughen, O' Brien & Jackson, 2011). Mentors may not be able to coordinate with the students due to a lack of time. Also, it is essential that the mentor understands the learning styles of the students and the leadership style they most respect (Cleary et al., 2013). When a student's preferred learning style is catered for, students learn quickly. This is often in contrast to classroom teaching where most of the time, it is assumed that the students have understood the topic well (Pastston et al., 2010).

Nurse-leaders use mentorship to grow and develop leadership potential in other nurses. Formal preparation to be a mentor is not fundamental to all mentorship. Some nurse-leaders who mentor others for leadership grow into being mentors as a result of lifelong subjective experiences.

Improved teaching learning recommendations

Price and Price (2009) described how role modelling can be more effective using a set of techniques to add both fun and efficiency in the process of clinical nursing mentorship and also discuss the principles regarding role modelling, as part of mentorship. They state that in

order to improve the process, a proper understanding of role modelling principles, the planning of clinical teaching is an effective session for role modelling, revealing clinical reasoning, discovering the understanding by the student and the formation of practice template are essential. The definition of the role modelling process, in relation to healthcare, is the development of expertise and competence (McGurk 2008). Bandura (1997) observed that humans mostly learn from emulation and observations of the individuals around them. The author also describes the conditions which are essential for the role modelling process to be successful. These include sufficient attention of the learner towards the role model, the learner's retention of key information, the ability of the learner to reproduce or effectively model the behaviour of the role model and reward and recognition from others regarding the learner's behaviour in order to motivate the learner. It might provide a measure by which to determine whether modelling has been properly adapted by the student.

Price (2007) emphasised the importance of experienced professionals in planning the role modeling session. The author explained the process of analysis of the nurses to practice their skills in appreciation of the strengths and abilities. This is an advantage because the nurses can explain and share their knowledge and have an impact on the learner. In a role modeling session, the difference between learning from advice and learning from the role model must be clearly defined.

Price (2009) also stated the importance of the ability of the practitioner to show understanding regarding the clinical reasoning of role models. This process is directly relative to the methods and techniques demonstrated by the role models. Price further explains three ways to plan responses in advance to the patient's questions. These include reasoning which can be shared by the patient in an ethical way, can be better considered once the event has passed and which helps in the exemplification of the best practice and is shown in an exploratory way. Some healthcare decisions and patient care activities should not be discussed when the patient is within earshot. This is because the patient might feel uncomfortable listening to the conversation, which can't be explained in depth to the patient due to its complexities. Weaver (2007) explains how sometimes the need for reflection is felt after the event has occurred. So the complexity of clinical reasoning can be reduced if questions regarding ethical, professional, effective and efficient clinical reasoning are considered.

Gobet and Chassy (2008) suggest templates as ways of representating situations which are helpful in carrying out decisions. Adapting the use of templates also increases the chance that a particular mentoring session will be effective, helping, understood in greater depth, and give an idea of what action to take next.

Practitioners are expected to formulate ideas for templates to deliver when they practice nursing in the future.

The success of the e-mentorship program for clinical nurses is discussed by Faiman et al. (2012) who used a survey which showed that, according to the post- and pre-test scores, the nurse educators who had taken part in the e-mentorship program demonstrated improved knowledge. In addition, more than half of the nurses in the sample population reported improvement in assessment, education relating to patients and a better understanding and communication with the patients. The research also concluded that the outcomes of management were also improved after using the e-mentorship program.

Gap Between Clinical Teaching and Clinical Practice

Clinical practice is as important as clinical teaching. Theories acquire value only when they find application in a real scenario. Clinical practice has much relevance for students who learn to apply clinical theories and, simultaneously, practice their skills. Clinical practice acts as an evaluation tool for the clinical teacher to determine how much positive effect their teaching has had to support better quality nurses.

Research suggests that, irrespective of the numerous teaching models devised, in order to improve the standard of teachers, as well as students, there are substantial gaps between clinical practice and teaching. One reason for this is the setting. While a classroom setting doesn't have the pressure of performance with time constraints and risk to life, students may fail to cope with the real, stressful situations of the clinical setting. This can give rise to anxiety and clinical errors. The real environment of the clinical setting must be imitated in the classroom, or bedside teaching must be implemented in teaching models in order to prepare students for their future role. A second gap is due to the imparting of theory-oriented teaching rather than practice-oriented teaching. Theory which originates from practice is very different from theory which is taught in the classroom. Since every human being is different from another, it is very difficult to predict how individuals will react, physically and mentally, to different interventions. This gap could be bridged by incorporating sufficient practical teaching. Students must be provided proper clinical supervision which helps in enhancing self-esteem as well as assisting them in the learning of practical skills. The bridge between teaching and practice is not very wide; by careful analysis and formulation of strategies, it can be addressed.

Conclusion

In a study conducted by Myall, Levett-Jones and Lathlean (2008), it was stated that "the results provide new evidence of a narrowing of the gap between the

theory and practice of mentoring and for the continuing implementation of standards to clarify the roles and responsibilities of the mentor". They also suggest that there are many benefits to developing such standards in countries with similar systems of support for nursing students. Students frequently perceive their mentors as role models, both professionally and personally. It is the duty of clinical teachers, who are placed as mentors, to have specified strategies to use in these contrasting settings. It is the clinical teacher/mentor's role and responsibility to nurture future nurses whose potential aids the delivery of better health care. This then implies that the selected teaching methods must be effective, specific to each learner's needs, and must incorporate every aspect of the student nurse's development.

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CHEMOTHERAPY SPILLS MANAGEMENT POLICY

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Abstract

Chemotherapy agents are considered life-saving chemicals because of their ability to eradicate certain malignant diseases as well as increase disease-free survival for patients with cancer; chemotherapeutic agents have been classified as hazardous by the National Institute for Occupational Safety and Health. Chemotherapeutic agents are therapeutic agents which are known to be toxic to cells through their action on cell reproduction and are primarily intended for the treatment of neoplastic disorders. As more and more chemotherapy is given in outpatient clinics and at home, it is extremely important that caregivers and patients understand the risks and hazards that household members may be under. Accidental spill of chemotherapy agents may occur during manufacture, transport, distribution, receipt, storage, preparation, and administration, as well as during waste handling and equipment maintenance and repair. Oncology nurses should receive specific training which includes principles of chemotherapy administration, safe handling of cytotoxic drugs, classes of chemotherapeutic agents and cell kinetics, anaphylaxis, spill, and extravasation management, management of chemotherapy side effects and patient teaching, use of N95 mask to prevent inhalation of chemotherapy, and add putting in sharp container in case chemotherapy is prepared in a glass bottle, how to remove the PPE in consequences, and how to clean CTX in case of exposure to the body.

Key words: **chemotherapy spills, chemotherapy management, policy, hazardous agents.**

Introduction

Health policy refers to decisions, plans, and actions that are undertaken to achieve specific health care goals within a society (World Health Organization [WHO], 2013). Health policy analysis is of increasing interest to sociologists in the areas of medical sociology and health services research (Atlantic International University [AIU], 2012). Chemotherapy spills management is containment and safely handling any unintentional, uncontained dispersal of chemotherapy (Oncology Nursing Society, 2005).

Chemotherapy is a cancer treatment that uses drugs to destroy cancer cells; it is also called chemo (National Cancer Institute [NCI], 2008). Today, there are many different kinds of chemotherapy, so the way the patient feels during treatment may be very different from someone else (NCI, 2008). Cancer chemotherapy drugs can cause mutagenesis, teratogens, carcinogenesis, and sterility when administered to humans; the risk varies with the specific drug and its concentration, and with the frequency and duration of exposure (NCI, 2008).

Chemotherapy agents are considered life-saving chemicals because of their ability to eradicate certain malignant diseases as well as increase disease-free survival for patients with cancer (Nurse.com, 2013), but studies have found that through occupational exposure to antineoplastic drugs, healthcare providers are at risk for harmful effects (Nurse.com, 2013). As more and more chemotherapy is given in outpatient clinics and at home, it is extremely important that caregivers and patients understand the risks and hazards that household members may be exposed to (Care giver, 2013). Cancer nurses have long known that exposing themselves to chemotherapy can be harmful to their health. That is why they follow strict standards published by the Occupational Safety Health Administration (OSHA) and the Oncology Nursing Society (ONS).

These guidelines include safeguarding against drugs that are found in the urine, vomit and stool of chemotherapy patients. When you care for someone who's receiving treatment in the home or outpatient clinic, you need to be careful about coming into contact with chemotherapy and the patient's body fluids; each area where cytotoxic chemotherapy is stored, prepared or administered should have a cytotoxic spill kit for all health care providers, patients and their families (Care giver, 2013).

Oncology nurses should complete a theoretical post-graduate course in chemotherapy administration from an accredited institution which includes principles of chemotherapy administration, safe handling of cytotoxic drugs, classes of chemotherapeutic agents and cell kinetics, anaphylaxis, spill, and extravasation management, management of chemotherapy side effects and patient teaching. Various surveys have been published.

As a result, comprehensive guidelines and safety precautions, especially for handling of hazardous drugs, have been elaborated on and adopted during the last three decades. Despite these efforts, recent studies have revealed that contamination of the workplace (safety cabinets and isolators, work tops, floors, vials, equipment etc.) with antineoplastic drugs still frequently occurs (Thikla et al., 2012).

Step 1

Study conducted in Mansoura University in 2010, revealed poor safety and significant adverse events among nurses handling cytotoxic drugs. Therefore, there is a need to improve the safety of the work environment; make available protective equipment; develop standard practice guidelines for oncology nurses; implement good planning and design of the workplace; provide adequate specialized equipment (such as cytotoxic drug safety cabinets) and personal protective equipment; establish clinical pharmacy practice; and integrate health monitoring programs that include the assessment and counseling of prospective nurses before they commence any work involving cytotoxic drugs and related waste (Elshamy, Hadidi, El-Roby, Fouda, 2010).

In searching many search engines, the most popular were multiple databases:

1. By searching via Science Direct, using key words: spills management, N95 mask, chemotherapy spills management an article was found: Impact of two particle measurement techniques on the determination of N95 class respirator filtration performance against ultrafine particles. (2012) Journal of Hazardous Materials.

2. Another article found in Science Direct, using key words: competence spills management, chemotherapy course, an article was found: Exploring the work of nurses who administer chemotherapy to children and young people. (2013) European Journal of Oncology Nursing

3. An article was found in Centers for Disease Control and Prevention (CDC): Health hazard evaluation report: chemotherapy drug exposures at an oncology clinic - Florida. By Department Of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. NIOSH [2012]

The purpose of this paper is to review and analyze the chemotherapy spill policy in King Hussein Cancer Center in order to identify issues and suggest alternative solutions and to determine the effectiveness of chemotherapy spill management policy in King Hussein Cancer Center, and provide safe practice in dealing with chemotherapy spills to protect the employees that deal with this hazard.

Problem statement: the question - does the chemotherapy spills management policy in KHCC provide safe practice to people dealing with chemotherapy spills?

The objectives of this policy analysis are:

1. To apply all steps for policy analysis.

2. Detect to what extent chemotherapy spills management policy is effective in KHCC.

3. Find out alternative solutions for problems and improve the policy.

4. Provide comprehensive precaution for personnel dealing with chemotherapy.

5. Identify strengths and weaknesses of KHCC policy and improve the weaknesses.

The challenge and struggles of this policy analysis are to convince the company of the need for new recommendation and editing of the policy, because while the hospital adheres in its value to change, edit, and develop the policy especially administrative employees, other conflicting issues are economic status because at KHCC there is shortage in budget in this period of time. Other conflicting issues convince the employees that for those dealing with chemotherapy the need to change behaviours during dealing with chemotherapy. After finishing the policy analysis the author will meet the stakeholders in order to discuss the conflicting issues and work to resolve them.

In research conducted in Egypt in 2010 to study the effect of chemotherapy on staff that prepare and administer chemotherapy, where two groups were divided into control group using appropriate PPE, and interventional group, the result of the study is as follows: abortions (31.4% vs. 10.3%), infertility & sub-fertility (14.3% vs. 3.4%), premature labour (14.3% vs. 17.2%), soft tissue injuries due to spills and splashes (14.3% vs. 0.0%), and developmental and behavioral abnormalities among the children of the nurses (8.6% vs. 3.4%). There was

poor use of protective equipment in the study group (Elshamy et al., 2010).

The people who are concerned in this policy, government hospitals, healthcare institutions, nurses, pharmacists, physicians, families and transporters of chemotherapy personnel, need optimal guidelines to deal with chemotherapy on evidence, and deal with it in a correct way if chemotherapy spills, to prevent harmful side effects that could happen. PPE precaution should be taken from administrative employees who have the legitimate power according to the authority in the hospital. Nurses, physicians, pharmacists, families, and transporters should be informed about precautions during preparation and dealing with chemotherapy, and asked about any questions that staff are confused about.

Step 2

King Hussein Cancer Center (KHCC) was established in Jordan, Amman in mid-1980 as a private hospital. The first name for the center was "Al-Amal Center" which means "The center of hope". Their mission is to provide state-of-the-art comprehensive cancer care to the people of Jordan and the Middle Eastern region. It is composed from many departments, pediatric, medical, and surgical, leukemia, Bone marrow Transplant (BMT), palliative, and clinics for chemotherapy administration.

King Hussein Cancer Centre Chemotherapy Spill Management Description

The purpose of KHCC policy for spill management is to provide guidelines for management of spilled cytotoxic agents. Definition of spill management is containment and safely handling any unintentional, uncontained dispersal of chemotherapy. Then defined is the spill kit and its equipment: spill kit is a pre prepared kit used for management of spilled chemotherapy. According to the second step in policy analysis in this part the author will define the objective and goals, and identify desirable and undesirable outcomes, and evaluate policy in terms of administrative ease, costs and benefit, effectiveness, equity, legality, and policy acceptability.

The goal of this policy is to provide optimal guidelines to staff who deal with chemotherapy, and fill the gap in chemotherapy spills management policy in KHCC to prevent the harm that results from spills.

The desirable outcome is providing new recommendations and convincing stakeholders to provide safe guidelines and precautions during dealing with chemotherapy.

Regarding undesirable outcomes the company refuses to apply new recommendations to the policy, and refuse the staff's wish to comply with the recommendation.

Chemotherapy spills management policy is clearly defined in terms of purpose, responsibility, content, and procedure, but it is limited in dealing with chemotherapy spills just to specific staff, and satisfies itself with policy reading to other staff, and they decreased in importance specific training and educational courses regarding spills management and actual practice to deal with it. This may well lead to decrease its effectiveness, since the policy used protective facemasks while other studies have shown that N95 Mask is more effective in chemotherapy spills, but the policy is legal since its applied from a specific person in hospital, and the policy is based on references, guidelines, and safe practice in dealing with chemotherapy. It's easily administered because policy explains procedure and a clear stated definition, purpose and steps of procedure but is limited to specific staff to deal with spills, not generalized to all staff who have access to chemotherapy. The cost will increase if hospitals work up specific courses for all staff that have access to chemotherapy. The policy provides safe guidelines to deal with chemotherapy and meets all policy criteria for this reason we can consider it acceptable politically.

Step 3

After extensive searching many options and alternative solutions were found to provide protective and comprehensive guideline during dealing with chemotherapy spills; the KHCC policy provides the correct way to deal with chemotherapy spills, but needs some modification to be comprehensive, and to provide educational courses about chemotherapy spills to all employee with access to CTX, use of N95 mask to prevent inhalation of chemotherapy, and put sharp containers in case the chemotherapy is prepared in a glass bottle. The KHCC policy didn't explain how to act in case of the staff being exposed and contact with chemotherapy drugs. In addition KHCC policy didn't explain how to remove the PPE in consequences. The first two points are according to the educational course and N95 mask. There is evidence in the literature review to use it, but the other alternative sharp container, removes PPE in consequences, and how to clean CTX in case of exposure to the body. This is my point of view and my opinion, as I have read many policies.

Step 4

After considering a wide range of options, and suggested alternatives, each alternative will evaluate in many aspects: administrative ease, costs and benefits, effectiveness, equity, legality, and policy acceptability. The first alternative prepares a special course regarding chemotherapy spills management to be available to all staff who access chemotherapy: nurses, pharmacists, physicians, transporters of chemotherapy, and housekeeping, not limited to specific people to deal with chemotherapy spills, and sufficiency with policy reading, and act it in practice, and role play how to deal with chemotherapy spills. The second alternative is using

Step 5

Table 1

Alternatives	Strengths	Weaknesses
Specific course and training	Provide safety comprehensive practice, and act with CTX spills	Expensive on Hospital, increase number of educators.
N95 Mask	Prevent inhalation of CTX product	Expensive
Sharp container	To prevent injury resulting from glass	Big size, cannot but in spills Kit
Consequences of PPE removing	Decreases and prevents exposure of the body to CTX	
How to deal in case exposed the body to CTX	Decreased harm that could result from CTX spills on Body	

Table 2

Alternative	Legality	Equality	Effectiveness	Administrative Ease	Costs and Benefits	Political Acceptability
Specific course and training	Legal	Equal to staff that are concerned	Effective	Not Easy	Not cost effective, expensive	Accepted
N95 Mask	Legal	Equal	Effective	Easy	N95 expensive, not cost effective	Accepted
Sharp container	Legal	Equal	Effective	Easy	Cost effective	Accepted
Consequences of PPE removing	Legal	Equal	Effective	Easy	Cost effective	Accepted
How to deal in case exposed the body to CTX	Legal	Equal	Effective	Easy	Cost effective	Accepted

Table 3

Alternative	Article
N95 Mask. Impact of two particle measurement techniques on the determination of N95 class respirator filtration performance against ultrafine particles	(Mostof et al., 2012)
Provide special course dealing with spills management. Exploring the work of nurses who administer chemotherapy to children and young people	(Gibson et al., *2013)*

facemask N95 instead of normal facemask, because it's effective rather than normal and provides a close fit on mouth and nose to prevent inhalation of chemotherapy. The third alternative, the spill Kit didn't contain a sharp container. The sharp container should be available in the Kit as a basic component to put glass pieces in the sharp container instead of putting it in a blue bag that could lead to injury to other personnel. The fourth alternative of how to remove the PPE in consequences to decrease the body exposed to chemotherapy drug, for example don't remove the eye goggles and wear gloves after finishing cleaning the chemotherapy. to decrease the chance to have chemotherapy reach the eye. Regarding the last alternative the KHCC policy didn't explain how to deal with the case of chemotherapy contacting the hand or eyes, in other words a safe practice to remove the chemotherapy on the body during cleaning, because any delay could lead to harmful injury.

According to expected outcomes the stakeholders in KHCC will agree on new alternatives, will add N95 mask, sharp container, instruct on how to deal in case the CTX is exposed to body, and how to remove PPE in the right manner, but the argument about special courses is not addressed because it needs increased numbers of educators in KHCC, and needs a lot of coordination among multidisciplinary teams.

Step 6

Expected outcomes from this policy analysis are to develop of current policy by providing the hospital with a specific course and training to all staff with access to CTX, and exchange facemask by N95 mask, put sharp container inside the KIT or always beside it, add step to the policy how to remove PPE in consequences, finally how to deal and act in case of exposure of the body to CTX.

The main purpose of this policy analysis is to check out the effectiveness of CTX spills management in KHCC, and provide new alternatives and suggestions and elaborate possible harm to staff. The plan to implement this policy analysis is to meet stakeholders in KHCC and convince them about new recommendations based on evidence, and suggest the alternatives to provide safety and comprehensive practice in case of CTX spills, and make a draft for new policy and recommendations and to give it to all staff that access CTX, and design a questionnaire to publish and distribute to all staff about their opinion regarding the new recommendations, and other Brochures to explain the risks and harm that could result from inappropriate manner in dealing with CTX spills. The author will work to publish the new recommendation in a journal to encourage the health workers to adopt new solutions, and gather employee opinions evaluating the new alternatives and documenting such.

According to the monitor, recheck competency of all staff after one year from the last course, and inform the educators in each department to watch each CTX spills, and how to deal with them in a correct way. We may use the cameras in hospital to monitor the behaviour of staff in case of chemotherapy spills.

The policy evaluation will depend on two points: numbers of injury resulting from chemotherapy spills in comparison with previous number of injuries, and the employee satisfaction about the new recommendation, and ask about their effectiveness.

The author will use the following table (Tables 4, 5 - opposite page) to evaluate the policy. The author will give it to stakeholders and all staff that have access to CTX, and then will use table to ask them about strengths and weaknesses of each alternative:

Discussion

The purpose of this paper was to evaluate and analyze effectiveness of chemotherapy spills management policy in KHCC. There are many injuries and accidents resulting from chemotherapy spills among nurses, pharmacists, transporters, and physicians. Safety precaution and practice require dealing with chemotherapy. This will lead the stakeholders to find alternatives, suggestions, and solutions to provide health and safety practice to health care professionals and workers, and let them be updated about recommendations of the latest research to provide optimal and high quality practice to deal with chemotherapy spills. This paper provides and suggests some alternatives for chemotherapy spills management policy in KHCC to eliminate weak points and provide latest recommendations.

The alternatives in this policy are to eliminate protective facemask and instead use N95 mask, provide specific courses and education to all health care professionals who are dealing with chemotherapy spills and chemotherapy, explain in the policy how to deal with scenarios where chemotherapy contacts the body, and mention the sequences to remove the PPE after finish of cleaning the spills, and to provide sharp containers to become a basic element in PPE.

The alternatives that the author mentioned in this policy analysis are applicable and easy to add to policy, and includes N95 mask, sharp container, how to deal in cases of exposure of the body to CTX, and how to remove PPE, but the argument will be on educational courses because the KHCC in these days complains of a shortage in budget and on this point we need increased numbers of educators in KHCC. I will meet with stakeholders and discuss with them how to resolve this point.

Table 4

Alternative	Legality	Effectiveness	Cost and Benefits	Administrative Ease	Equality	Political Acceptability
Specific course and training						
N95 Mask						
Sharp container						
Consequences of PPE removing						
How to deal in case exposed the body to CTX						

Table 5

Alternatives	Strengths	Weaknesses
Specific course and training		
N95 Mask		
Sharp container		
Consequences of PPE removing		
How to deal in case exposed the body to CTX		

This policy analysis will expose to stakeholders in KHCC to act on it in practice, and to examine and explore the magnitude of the effectiveness of new alternatives.

New Chemotherapy Spills Management Policy

1.Purpose:

o To provide guidelines for management of spilled cytotoxic agent

2. Policy:

o Chemotherapy spill kits shall be available on all nursing units where chemotherapy is routinely administered.

3. Responsibilities:

o It is the responsibility of registered nurse (RN) to implement the approved policy

o Head of the unit is responsible for communication and to ensure application of the approved policy and procedure.

o Head of the unit would check the availability of prepared spill kit

o Training centre in KHCC is responsible for accomplishing a special course to deal with chemotherapy spills management for all staff access with to chemotherapy, - theoretical and clinical part.

4. Definitions:

o Spill Management: is containment and safe handling ofany unintentional, uncontained dispersal of chemotherapy

o Spill kit: which contains the following (minimum) :

1. 2 blue plastic bags

2. 1 sign (chemotherapy spill)

3. 2 absorbent paper towels.

4. 2 non absorbable dry towels.

5. 2 pairs of latex gloves.

6. Eye goggles.

7. N95 Mask

8. Sharp container.

9. Disposable gown with long sleeves.

10. Small scoop and brush

11. 1 pair overshoes.

5. Procedure:

1. In case of chemotherapy spill and the amount is more than 10ML call for Code Green

2. Secure the area by alerting the staff that chemotherapy spill has occurred, ask the visitors to leave the area.

3. Obtain chemotherapy spill kit.

4. Put on all Personal Protective equipments (PPEs) in the spill kit.

5. Prepare the blue plastic bag.

6. Use absorbent towels; contain spill moving from outside to inside until it becomes dry.

7. Place dry paper towel.

8. Dispose of all contaminated equipments in blue plastic bag.

9. When finished with spills cleaning, remove the Gown, then overshoes, Gloves, N95 mask, then Eye Goggles to decrease possibility of contact of chemotherapy to body.

10. Wash hands.

11. Notify housekeeping for ordinary cleaning

12. Notify physician for cytotoxic agent replacement

13. Fill out event report and safety incident report if code green has been requested

14. Document in nursing notes.

15. Notify chemotherapy preparing area (pharmacy) if replacement required

16. If the spill is on a patient or staff member, remove the contaminated clothing and immediately wash the skin with soap and water for 20 minutes. If splashed in the eyes, rinse with water for 15 minutes. An eye wash or eye bath should be located in all areas where splash risk may occur.

6. Documentation Requirements:

o Event Report.

o Nursing Note.

o Safety incident report

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CHEMOTHERAPY SAFE HANDLING: POLICY ANALYSIS

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Abstract

Chemotherapy has an important role in cancer treatment. The National Institute for Occupational Safety and Health categorizes chemotherapy as hazardous drugs. Hazardous drugs pose a potential health risk to personnel who prepare, handle, administer, and dispose of these drugs. Chemotherapeutic agents pose any one of the following characteristics: genotoxicity, carcinogenicity, teratogenicity, or fertility impairment. The risk for exposure-related cancers is increased in health care workers who handle chemotherapy and in female health care workers who become pregnant; there are also the potential hazards of spontaneous abortions, stillbirths, and teratogenic effects on unborn fetuses. Patients receiving chemotherapy and their family members, can also be exposed to the hazards of chemotherapy drugs when they handle contaminated equipment or body fluids. Several studies carried out at hospital units have shown detectable levels of cytotoxic agents in the air, on surfaces, on gloves, and on different parts of the body. The presence of these drugs in the urine of hospital personnel has been widely studied. Thus, it is important for everyone who prepares, handles, administers, and disposes of chemotherapeutic agents to review and analyze the policy of safe handling of cancer chemotherapy drugs and waste.

Key words: **chemotherapy, safe, administration, policy, analysis.**

Introduction

Health policy is defined as a set course of action undertaken by governments or health care organizations to obtain a desired outcome (Cherry & Jacob, 2007).

Health policy analysis is defined as an interdisciplinary approach that analyzes current health policy and proposes various alternatives for developing future health policy without pushing a single solution set - rather, it considers the perspectives of economics, political science, management, communications, technology, and public health (McLaughlin & McLaughlin, 2008).

Chemotherapy has an important role in cancer treatment (Green et al., 2009). The National Institute for Occupational Safety and Health (NIOSH, 2004) has categorized chemotherapy as hazardous drugs. Hazardous drugs pose a potential health risk to personnel who prepare, handle, administer, and dispose of these drugs (Itano & Toka, 2005).

Some patients who have been cured of cancer develop secondary malignancies believed to be linked to exposure to their initial chemotherapy regimen. If patients receiving potentially curative chemotherapy are at increased risk of developing secondary cancers, what is the risk to health care workers who prepare and administer these agents? (Green et al., 2009). Although health care workers are exposed to much lower doses than cancer patients are, low-dose exposure over long periods can have long-term health effects (Moretti et al., 2011).

Potential routes of exposure are:
1- direct contact - skin and mucus membrane contact and absorption, inhalation, or ingestion (e.g., contaminated food), accidental needle stick.

2- Indirect contact - body fluids and excreta of clients who have received antineoplastic agents within the past 48 hours (Itano et al., 2005).

Significantly higher frequency of DNA damage - has been analyzed using the alkaline single cell gel electrophoresis technique (comet assay) - in lymphocytes of nurses handling antineoplastic drugs compared to unexposed controls; the DNA damage was, however, found to be significantly lower in nurses using compulsory personal protection equipment during their work (Moretti et al., 2011).

Thus, it is important for everyone who prepares, handles, administers, and disposes of chemotherapeutic agents to review and analyze the policy of safe handling of cancer chemotherapy drugs and waste.

Step 1

Verify, define and detail the problem

Issue statement

Does the policy of safe handling of cancer chemotherapy drugs and waste in Albashir hospital provide a safe environment and prevent hazardous effects to health care workers?

Scope of problem

Chemotherapeutic agents pose a potential health risk to personnel who prepare, handle, administer, and dispose of these drugs; chemotherapeutic agents pose any one of the following characteristics: genotoxicity, carcinogenicity, teratogenicity, or fertility impairment (Itano, Toka, 2005).

Chemotherapy, because of its relatively narrow therapeutic index, is often associated with a greater risk of adverse events (AEs) than other medications, and when used in combination, may result in an even greater incidence of AEs (Goodin et al., 2011). Potential effects of exposure to hazardous drugs: 1- short term- occur within hours or days after exposure: contact dermatitis, alopecia, local skin or mucus membrane irritation, blurred vision, allergic response, dizziness, gastrointestinal (GI) tract problems, headache. 2- Long term- occur within months or years after exposure: liver damage, chromosomal abnormalities, increased risk of cancer, reproductive risks (Itano et al., 2005). Green et al., (2009) reported that the risk for exposure-related cancers increased in health care workers who handle chemotherapy and in female health care workers who become pregnant; there are also the potential hazards of spontaneous abortions, stillbirths, and teratogenicity effects on unborn fetuses. Patients receiving chemotherapy and their family members can also be exposed to the hazards of chemotherapy drugs when they handle contaminated equipment or body fluids (CNSA, 2003). Several studies carried out at hospital units have shown detectable levels of cytotoxic agents in the air, on surfaces, on gloves, and on different parts of the body. The presence of these drugs in the urine of hospital personnel has been widely studied. This has led several organizations to develop guidelines or recommendations with the aim to improve safety during the handling of antineoplastic drugs and reduce risk of contamination in the workplace (Moretti et al., 2011). In addition chemotherapeutic agents may be used for diseases other than cancer, such as Lupus, and multiple sclerosis. In some hospitals these drugs are being administered by nurses without proper training or being chemotherapy certified which may increase exposure to chemotherapeutic agents for healthcare providers (Polovich, 2004). Many institutions introduced and implemented policies and procedures designed to minimize occupational exposure and consequent risks associated with handling cytotoxic drugs including economic impact. Health care institutions would have to value the significant expense to comply with this policy and the real cost must be weighed against the potential high cost of the treatment of the health care workers.

No relevant policy analysis was found regarding safe handling of chemotherapy.

Search resources and associated search terms were Science Direct Database, PubMed, and Google scholar, using keywords: chemotherapy, safe handling, policy, cancer, hazardous drugs, in multiple combinations.

Purpose

This paper aimed to provide policy analysis for safe handling of cancer chemotherapy drugs and waste in one governmental educational hospital (Albashir hospital) in order to identify issues and propose alternative solutions, alternative policy recommendations for this issue by using a six-step policy analysis model which will verify and define the problem through implementing, monitoring and evaluating this policy.

Hospital administrative staff may refuse the change because of the persistent nursing shortage problem, inability of the health ministry to hire additional numbers of staff, the change requires more staff, and the cabinet for the preparation of chemotherapy is not accommodated in the hematology department. One of the alternatives is to specialize a room for chemotherapy preparation. A containing safety cabinet is not necessary to be in the same department if it is not accommodated, so there is an urgent need to seek the help of Biomedical Engineering and Architecture staff, and to put this issue as first priority for administrative staff; it could be near the department.

If policy of safe handling of cancer chemotherapy drugs and waste is not applied excellently and with great caution, the health care workers and even health

care institutions will be in fear of unsafe handling of chemotherapy drugs and waste mentioned previously in this paper. Consequences of chemotherapy unsafe handling will affect primarily the patients; and delay may occur and affect nurses and health care institutions, therefore there is need to improve the safety of the work environment; make available protective equipment; develop standard practice guidelines for oncology nurses; and equipment (such as cytotoxic drug safety cabinets).

All people who are affected by unsafe handling of chemotherapy directly or indirectly are concerned in this policy analysis. The government, healthcare institutions, healthcare professional/workers, and patients and their families. The government (Ministry of Health) have to fund health care institutions to make a safe environment for safe handling of chemotherapy including safety cabinet in specialized room and also have to hire additional numbers of staff. The health care institution has the responsibility to adopt policies that respond to the needs of patients and health care workers, and maintain the physical environment, patient and staff education and training.

Health care workers have to update their information regarding chemotherapy and safe handling and to seek a safe environment and specialized equipment for the preparation of chemotherapy and disposal of waste.

Step 2

The purpose of the policy is to delineate appropriate handling of cytotoxic agents and safe dealing and handling of its waste products, in addition to ensuring quality patient care and optimal occupational safety during the administration of chemotherapy drugs. It is the policy of the radiotherapy department to apply best safety practice in handling of cytotoxic agents and its waste products to assure staff, and patient safety. Policy will be evaluated in terms of administrative ease, costs and benefits, effectiveness, equity, legality, and policy acceptability. The desirable outcomes are providing new recommendations for stakeholders and to be applied and hence ensure safe practice and build a safe environment in the whole health care institution. The undesirable outcomes are resistance to change by health care workers; they not aware of the importance and seriousness of safe handling of chemotherapy, and the inability to assign more staff in the oncology department by health care institutions because the alternatives will cost them.

Safe handling of cancer chemotherapy drugs and waste policy is clearly stated in terms of purpose, values, and responsibility, definitions, and guidelines, and mostly covers all safety practices, is relatively easy to administer, is cost effective, is not equal for all departments, is legal and accepted but not easily accessible.

Step 3

The policy mostly covers all safety practices, but need to be comprehensive, clear, unified for all departments, and some aspects must be added because of their importance.

The alternatives are: a) unify the policy for departments dealing with chemotherapy, mainly radiotherapy/medical oncology department (solid tumor) and hematology floor, b) safety cabinet in specialized room for chemotherapy preparation in hematology floor, c) that chemotherapy should be administered only in oncology departments even for non-cancer patient, d) RNs who didn't receive specific education and training regarding chemotherapy are not privileged to deal with chemotherapy.

Experts from Albashir hospital were consulted. Most of them showed acceptance and interest. It's planned to propose and consult on this policy analysis with the policy development committee.

But the question again is, does the policy of safe handling of cancer chemotherapy drugs and waste in Albashir hospital provide a safe environment and prevent hazardous effects to health care workers?

Step 4

For the evaluation of the policy we should identify the major missing factors that lead to occupational hazards in the work place, and then find the best alternatives that may strengthen the policy and protect the health care workers from hazards of unsafe handling of chemotherapy. Chemotherapy is mainly administered in Albashir hospital in two departments: radiotherapy/ medical oncology department (solid tumors), and in hematology floor (blood cancers mostly). In the radiotherapy department there is a safety cabinet in a specialized room where the preparation is being done, but in the hematology floor there is no safety cabinet in a specialized room because the safety cabinet does not accommodate the chemotherapy preparation room in the new building where the hematology floor is , besides it is not stated in the policy that chemotherapy preparation should be in the chemotherapy preparation room inside a safety cabinet. Also the policy is made for the radiotherapy/medical oncology department (solid tumor) as mentioned in the definition; the policy should be the same for departments that deal with chemotherapy. also during my work I noticed that chemotherapy is prescribed for non-cancer patients outside the chemotherapy department ; a real example is once a nurse came to me in the hematology floor from medical floor and he showed me a medication (cyclophosphamide) for a patient with Behçet's disease and he asked me is this chemotherapy? How is this medication prepared? How is this medication administered? So we should add to the policy that chemotherapy should be administered only in the

oncology departments even for non-cancer patients, because in non-oncology departments there is no specialized chemotherapy preparation room, and non-oncology nurses didn't know how to deal with chemotherapy safely. Staff with minimal experience or no experience may be responsible for handling hazardous drugs in units or areas that do not normally care for cancer patients with chemotherapy management. Specific training is required to prepare those staff before assigning them to such a procedure (Brown et al., 2001). So we can add to the policy that RNs who have not received specific education and training regarding chemotherapy are not privileged to deal with chemotherapy; some local hospitals apply this point, but it is not clearly stated in their policies. Education and training should focus on risks of exposure based on strong evidence from research findings. All these alternatives will ensure safe handling of chemotherapy.

Table 1: Appropriate methods of applying alternatives and expected outcomes

Alternative	Appropriate method for applying it	Expected outcomes
Unify the policy for departments dealing with chemotherapy	Distribute the same policy for departments that deal with chemotherapy	- Departments that deal with chemotherapy have the same safe environment - Nurses can work in both departments - Equity will be met
Chemotherapy preparation room containing safety cabinet in the hematology floor	Seeking the help of Biomedical Engineering and Architecture, and to put this issue at first priority for administrative staff	- Safe environment - Eliminate hazards of chemotherapy - Equity will be met
Chemotherapy should be administered only in oncology departments even for non-cancer patients	Circulate this point to all physicians and to the admission office through meetings	- Create safe environment in the whole health care institution - Eliminate hazards of chemotherapy to non-oncology nurses and patients - Equity will be met
RNs who didn't receive specific education and training regarding chemotherapy are not privileged to deal with chemotherapy.	Theoretical part in nursing development unit, it could be one day, and one day practical	- Increase the orientation of nursing staff regarding this issue - Minimize errors that may occur with chemotherapy

Step 5

Table 2: Alternative solution

Alternatives	Administrative Ease	Cost and Benefit	Effectiveness	Equity	Legality	Acceptability
Unify the policy	Easy	Cost effective	Effective	Yes	Legal	Acceptable
Safety cabinet in the hematology floor	Not easy	It already exists, but fitting it will cost	Effective	Yes	Legal	Acceptable
Chemotherapy should be administered only in oncology departments	Easy	Cost effective and highly beneficial	Effective	Yes	Legal	Acceptable
Specific education and training	Not easy	Depends on level and type of training	Highly effective	Yes	Legal	Acceptable

Table 3: Strengths and weakness of each Alternative

Alternatives	Strengths	Weakness
Unify the policy	Easy, Effective, legal, meet equity, Nurses can work in all oncology departments	Expensive on Hospital, increase number of educators.
Safety cabinet in the hematology floor	Effective, meet the equity, eliminate hazards and provide safe environment	It already exists, but fitting it will cost, and then training is needed
Chemotherapy should be administered only in oncology departments	Effective, legal, create safe environment in the whole health care institution. Eliminate hazards of chemotherapy to non-oncology nurses and patients, meets equity	Makes multi-party conflicts, and increases the load on oncology departments
Specific education and training	Effective; Increases the orientation of nursing staff regarding chemotherapy. Minimizes errors that may occur with chemotherapy through providing safety practices	Expensive; It will cost the hospital, needs more educators, not easy

Step 6

The main goal of this policy analysis is to provide standardized guidelines in order to ensure safe handling of cancer chemotherapy drugs and waste, and to fill the gap in the policy and discuss and evaluate best alternatives. The plan to implement new policy is to meet stakeholders in Albashir hospital and convince them about new recommendations, but before that I will make a brochure about chemotherapy and risks of exposure and routes of exposure and emphasizing on the importance and seriousness of safe handling of cancer chemotherapy drugs and waste, and then distribute it to all oncology staff, and I will also distribute for them a draft of a new policy and I will take their feedback by filling in a questionnaire and the table of alternative solutions evaluation in terms of administrative ease, costs and benefits, effectiveness, equity, legality, and political acceptability. I will work to publish this policy analysis in a journal to encourage health care workers and convince stakeholders to consider new solutions. Albashir hospital stakeholders should have access to the proposed recommendations.

I will recommend to designate a committee of health professionals as a monitoring system for assuring compliance with the safe handling of cancer chemotherapy drugs and waste policy, and check competencies of all oncology staff regarding safe handling of chemotherapy frequently, monitoring and measuring safe, quality and ethical services, encouraging staff to report incidents, not for disciplinary action but for identifying problems and finding solutions.

I will use the following tables to evaluate the policy; I will give it to stakeholders and all oncology staff in the radiotherapy department and hematology department and ask them to fill in the tables (following page) :

Table templates

Alternatives	Administrative Ease	Cost and Benefit	Effectiveness	Equity	Legality	Acceptability
Unify the policy						
Safety cabinet in the hematology floor						
Chemotherapy should be administered only in oncology departments						
Specific education and training						

Alternatives	Strengths	Weakness
Unify the policy for oncology departments		
Safety cabinet in the hematology floor		
Chemotherapy should be administered only in oncology departments		
Specific education and training		

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GUIDELINES FOR ARTICLE PUBLISHING

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Abstract

With papers from the journals listed above, now in several major databases and with the application of unique DOIs (Digital Object Identifiers) to all individual articles, we are publishing the following advice and revision of guidelines for our authors. This advice reflects the current status of academic online publishing.

Key words: plagiarism, duplicate publications, DOIs

Introduction

Most publishers have adopted the use of unique DOIs on papers in their online journals. This facilitates the identification and therefore citation, of papers. It also allows for a better recognition of plagiarism and readily identifies duplicate publications on online databases.

The International DOI Foundation (IDF), is a not-for-profit membership organization that is the governance and management body for the federation of Registration Agencies providing DOI services and registration, and is the registration authority for the ISO standard (ISO 26324) for the DOI system. The DOI system provides a technical and social infrastructure for the registration and use of persistent interoperable identifiers, called DOIs, for use on digital networks. (1)

Publishers pay an annual fee for the allocation of DOIs.

Such a facility provides easier access and identification of published papers but also has an imperative that each article be unique and properly indexed.

Most journals have full Author Guidelines and comply with the COPE Code of Conduct. Visit http://publicationethics.org/files/u2/New_Code.pdf for full details.

I follow with a worthy checklist to better guard against various forms of research misconduct, from an article originally published in the Middle East Journal of Family Medicine.

Research misconduct encompasses a vast array of behaviours, from very serious research misbehaviour such as data fabrication to the less serious aspects such as authorship disputes. It would be possible to categorize very serious misbehaviours as research fraud and less serious types as questionable research practices.

From one hand, evidence suggests that different research misconduct, either research fraud or questionable research practices might have substantial damaging impact on the advancement of human knowledge. On the other hand, some novice and young researchers might innocently commit such misconduct. Therefore, the aim of the present article is to overview diverse types of research misconduct.

Data fabrication and data falsification

Data fabrication means inventing fake data whilst data falsification implies distorting existing data to obtain some specific results. Both of these research misbehaviours are among the most serious research misconduct i.e. research fraud.

Plagiarism and self-plagiarism

Plagiarism implies stealing other people's ideas and self-plagiarism means stealing one's own idea both without providing proper attribution. Plagiarism and self-plagiarism could start from one sentence and might extend to one paragraph and even a full article. Plagiarism especially in larger text copying is categorized as research fraud.

Duplicate publication, redundant publication and salami publication

Duplicate publication indicates publishing two identical articles whilst redundant publication involves publication of two rather similar articles. Salami publication also denotes publishing two or more articles from a single study. It should be noted that only large epidemiological studies might permit publication of more than one article. Whilst duplicate publication can be categorized as a serious research misconduct, redundant and salami publication might be considered as less serious forms.

Failing to gain approval for the research proposal from an ethics committee for research

Failing to gain approval for the research proposal from an ethics committee for research could be regarded as a serious type of research misconduct. This gets worse when the proposal deals with interventional design in human subjects such as in clinical trials. Therefore, it is highly suggested that any research proposal should receive approval from an ethics committee for research.

Conducting research in humans and/or animals without considering ethical issues

Approval for the research proposal from an ethics committee for research is a necessary but not sufficient step for avoiding research misconduct. In addition, researchers should take into account any relevant ethical approved guidelines when dealing with humans and/or animals subjects. Failing to consider such ethical issues could be regarded as serious types of research misconduct.

Ignoring outliers, ignoring missing data, reporting post-hoc analyses without declaring them.

Any wrong doings in the process of data analyses such as ignoring outliers, ignoring missing data, reporting post-hoc analyses without declaring them, could have serious impacts on the results. Therefore, it is necessary that researchers admit and declare any outliers and/or missing data. Furthermore, carrying out any type of post-hoc analyses should be declared in advance by the researchers.

Authorship disputes

Authorship disputes encompass any disagreements between researchers about the names and orders of the authors in a given paper. Unfortunately, evidence suggests that such questionable research practice is rather common in different countries around the world. Therefore, it is up to authors to consider the authorship criteria in order to name in the right order only true authors and avoiding guest or ghost authorships.

Failing to disclose a conflict of interest

Conflict of interest implies that researchers, reviewers and editors have a relationship either financial and/or non-financial to a person, school of thought, organization; etc that might cause unwanted impacts on the process of scientific publication. The most important way to avoid any research misconduct regarding conflict of interest is to disclose any possible conflicts before publishing a paper.

Failure to carry out a thorough literature review before commencing new research

Failure to carry out a thorough literature review before commencing new research is judged to be a questionable research practice. The reason for this is too obvious, since inadequate literature review might lead to flawed or repetitive research. (2)

References

(1) www.doi.org

(2) Rezaeian M; A review on the diverse types of research misconduct, Middle East Journal of Family Medicine, Volume 12, Issue 7, September 2014

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