PAKISTAN JOURNAL OF PUBLIC HEALTH

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The Pak J Public Health accepts articles from both national and international contributors with a special emphasis on research that will have a direct impact on the practice of public health in Pakistan and around the world. The types of articles accepted include original articles, review articles and short communications. Special features will include opinion pieces, letters to the editor, education forum and students corner.

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ABUSE DUE TO JEALOUSY: A CASE STUDY

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Abstract

Neurosurgeons are obviously concerned with child abuse in cases/emergencies of severe cranio-cerebral trauma. Aim of this case presentation is to highlight the clinical picture and symptoms in a neglected case of child abuse and our multidisciplinary approach towards a solid diagnosis. Important aspect in neurosurgery is to determine the cause of actual assault and to treat the patient to save the life first. We here discuss a case with head injuries of intentional type in jealousy that causing permanent signs of traumatic injury. Such cases not timely diagnosed and are treated by the general physician as cases of epilepsy or seizures.

Key words: Child abuse, traumatic injuries, social injustice.

Introduction

Child abuse is a serious social problem for the entire community as abused children may suffer suicide, homelessness, permanent physical mental illness, or emotional injuries, or even death. Physical abuse is physical punishment, or the non-accidental use of violence by a parent or caregiver, that causes injury to a child¹. It includes hitting, shaking, beating, throwing, burning, strangling or biting that may result in a range of injuries, such as fractures, dislocations, cuts, burns, lifelong mental regardless or assault and bruises. Even forms of physical punishment that do not result in physical injury are considered physical abuse and are outlawed. Here we present a case of physical assault by a child in infancy resulted in chronic epileptic condition and lifelong mental stress.

Case Report

A young boy aged 15-17 years presented with a history of seizures since long, loss of consciousness on and off with a frequency of 1-2 per month. The child was adopted and has lost his parents in early infancy. He was then adopted by her maternal aunty. He was not livening with his paternal family due to some family issues and was grown up as adopted child. Child was science student of first year in college. He was the only owner of a land and the only care taker of his father assets. According to the child he has these seizures since child hood and the parents adopted him have taken his treatment from number of doctors and was labeled as epileptic.

We did the full blood count that was normal, Serum calcium 7.6g/dl, Random blood sugar 93mg/dl, serum electrolytes Na+ 134meq/l and K+ 4.5meq/l, cl- 109 meq/l. as we did not found any metabolic cause of the fits then we did CT scan of the child and found some metallic spots in the brain matter. The general look of the child is shown in fig 1. Young child anemic, not well built and School dressed.

Fig 1. general built of the child-abused.
The CT scan of brain with bone window of the patient is shown in figure 2a and 2b, and figure 3. It showed metallic spots.

![CT scan of brain](image1)

**Figure 2.** Figure showing three metallic spots in the grey matter figure 2a. All the three spots had entry with anterior fontanels Figure 2b.

We there developed a suspicion of some foreign body in the brain. Then we moved forward and did a plain X-ray of lateral side of the skull and anterior view. We found that three sharp large needles were passed into the anterior fontanels and extended down to press it in the skin of scalp, reaching near to the both heads of caudate nucleus and just above the midbrain, the vital organs.

![Plain X-ray](image2)

**Figure 3.** A Plain X-ray PNS and lateral view of the scalp showing three needles inserted fontanel.

One needle tip is just above mid brain. Two needles, one needle twisted due to applied force and piercing both heads of caudate nucleus and reaching to supra-sellar area. Third needle also entered the brain tissue and reaching up to midbrain.

**Discussion**

What we observed that as the child was only son and care taker of his father all assets. This child was attempted to be harmed in infancy just for to get the assets etc, means by the jealousy of the near by relatives etc. The child though gets lived but was in permanent seizures disorder. It shows the nature of the social norms, social enmity, jealousy that exists in our society and confirmed from the diagnosis of this child.

Child was subject to this much cruelty and stress in his childhood and was subject to death. And also we observed that though the child had received long term treatment for epilepsy but the exact diagnosis was not established. According to a research project from North Carolina published in 2003, approximately 1,300 children experience severe or fatal head trauma as a result of abuse each year, and inflicted head injury is the most common cause of traumatic death in infancy2-4. Infants presenting with impairment of consciousness, seizures, head circumference enlargement and subdural hematomas, along with no obvious etiology always prompt the pediatrician to make this possible diagnosis 5,6.

This was an interesting case; it is public health related neurosurgical issue. It shows to what extent a man/woman goes just for the things that he/she will also leave as such when dies. These needles had reached very near to the vital organs like one needle touching the grey matter just above the mid brain, if was touched at that stage could have been lethal for the child.

The child was symptomatically treated. No intervention done to remove the needles as these were inserted in the childhood life and had developed adhesions. So any intervention could have been lethal.

Careful clinical examination, including a search for radiological and laboratory findings should greatly facilitate the correct diagnosis.

**References:**

QUALITY OF MATERNAL HEALTHCARE: THEORETICAL PERSPECTIVE ON QUALITY MEASUREMENTS

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Abstract

Background: Maternity care is an imperative aspect of healthcare systems due to its demand of intensive care focusing on mothers' and newborns' health. By consideration, child birth is a natural process but needs appropriate care. Provision of quality care to mothers and newborns at healthcare centers and hospitals is crucial for consideration in health systems.

Method: The paper consisted of conceptual understanding of the measurement of quality care for maternal and newborns in hospitals. After careful screening of the available literature, 30 articles were selected and reviewed for this paper.

Results: Various literature focused on three perspectives to study quality of care i.e; structure, process and outcome. Hospitals are the place to provide short term care service to the patient revolved around the activities provided by doctors, nurses and other staff. The utilization of efficient health services depends on the providers' ability and competence to deliver quality care, which shows the process of health services. On the other hand, the patient's centeredness is also the apex agenda to know the outcome of the services delivered to them.

Conclusion: Therefore, in order to study quality of health care it is necessary to highlight the provision of quality care services in terms of structure, process and patient's perspective towards health care services and its quality to achieve better outcomes for maternity care.

Key words: Quality of health care, maternal health, healthcare services, quality measurements, health system.

Introduction

In healthcare quality requires conscious efforts with the intention to achieve the best possible outcome of the activities performed. Based on the declaration of Alma Ata in 1978, the healthcare systems are under pressure towards the accomplishment of healthier and equitable health services for all (1). To fulfill the health needs of the population, the hospital is a major social institution which provides healthcare services to the society. The hospital is a place where illness and diseases are cured through medical treatment that rehabilitates the health and well-being of such people. Globally, both public and private hospitals work together to fulfill the needs of the population but each system has its own autonomous body and structure of delivering healthcare services.

Despite the paramount accomplishments in developing strategies to improve healthcare services for mothers and newborns, maternal and newborn, mortality and morbidity rates are not declining at a high pace particularly in developing countries. Besides the number of socio-cultural, economic, regional and geographical disparities, the delivery of quality healthcare services by the hospitals themselves have impacted on motherhood related concerns.

According to Save the Children's Report (2) an estimate eight million babies are stillborn or die in the first month of life. Among these deaths, 98% occur in developing countries. Despite many motherhood programmes in these countries that concentrate on saving new mothers, the maternal death ratio is still very alarming as it is estimated that more than half a million women still die each year due to pregnancy related causes. The global estimate of child mortality also indicates that about four million neonates die each year due to inefficient services available to them.

One of the reasons for maternal and newborn increasing death ratio is impediment in provision and access to quality care. Although the instant factors of maternal and newborn death may differ according to socio-economic and cultural differences, the underlying
causes of these deaths may be very similar. One of these causes consists of the inability to access quality maternal and newborn care, especially at the time of delivery (3). The inability of the timely provision of equipped and quality services has resulted in complications for the newborn baby. To improve the condition of maternal and newborn health, it is necessary that healthcare services must be equipped with advanced technology and ample care services that help to provide efficient and quality care to the patients. This paper highlights the quality of care mechanisms necessary to utilized to enhance the healthcare service delivery at hospital in better and competent way.

Method
The paper is consisted of reviewed articles on quality of healthcare published in various national and international medical and public health journals. The selection of articles for the critical review is described in the following diagram:

All the papers were accessed by using PubMed and MEDLINE database and screened the actual research studies reported different dimensions of the quality of healthcare. As the focus of my study was maternal healthcare, therefore after the vigilant review, 30 articles were studied and included in the paper which focuses on quality of maternal and newborn healthcare should be an important factor to be considered in primary healthcare system. Berhane and Enquselassie (5) mentioned six attributes to investigate the effectiveness of the healthcare services from patients’ perspective such as waiting time for consultation, doctor-patient communication, nursing communication, availability of medicines in the pharmacy inside the hospital, continuity of care and diagnostic and treatment facilities.

Quality of Care
Quality of care has its long history that can be traced back to the 1860s when British head nurse Florence Nightingale pointed the need for a uniformed system that evaluates the hospital’s performance. Her efforts brought to light the subject of healthcare quality in assurance programmes. Later in 1914, the US also highlighted the healthcare quality matters for curing patients' illness by improving the quality of healthcare institutions (4). From that time till now, the quality of healthcare is considered the most important and critical aspect of healthcare systems.

Achieving quality in health facilities require appropriate performance of technological interventions according to the prescribed standards of quality care. In order to achieve quality care, it should be necessary to adopt the programme and policy that focus on issues related to adoption and efficient utilization of healthcare resources and its management. To reduce maternal and infant mortality and morbidity, quality of maternal and newborn healthcare should be an important factor to be considered in primary healthcare system. The process of healthcare delivery is the core of any model and performance measurement scale (6). Every action in the organization constitutes upon preplanned and well thought-out process. Quality of care is based on the application of medical science and technology in such a manner that provides utmost affirmative outcomes for health while diminishes hazards. These studies mention that the quality of care is the outcome of biomedical process of health services but the social possession of healthcare with the advancement of technological intervention is not taken into consideration to determine the quality of care. Therefore, there is a need to focus on all dimensions of healthcare in order to develop real and better understanding of the quality of healthcare.

Quality of care can also be measured through quality management strategies adopted by the hospitals. Another study (7) identifies eight management practices at public hospitals in Malaysia. These practices or indicators of quality management include strategic planning, quality assurance, teamwork, leadership commitment, employee involvement and continuous improvement efforts as well as providers’ partnerships. The findings indicate that public hospitals in Malaysia have been using quality management system since the 1990s and have continuously improved by adapting new techniques and technologies. Although quality of care is central to the entire health services provided at hospitals, it is more imperative for the provision of maternity care due to its precarious nature.

Hence, measuring quality of healthcare is an important inditcer to evaluate the performance of healthcare systems which is crucial to be taken in order to meet the recognized standards of quality care. Generally quality of care as mentioned in above literature measured through three perspectives i.e: structure, process and outcome of the healthcare services delivered at the hospitals mentioned in the figure below:
Fig 1. Authors' developed interrelated indictors to measure quality of care
It is analyzed that quality of care is also dependent on number of other variables which are defined in the above diagram. Technology plays an important role to improve the quality of care provided to the patients.

Quality of Maternity Care
WHO (8) mentioned that the provision of effective and quality care to mothers and newborns are the key indicators to reducing maternal and newborn mortality and morbidity. The Millennium Development Goals 4 and 5 also emphasize on reducing maternal and under-five mortality rates by providing access to healthcare which should be equitable and efficient for all. It is estimated that 80% of the mortality can be reduced through the provision of effective and affordable quality healthcare services to mothers and newborns22. Furthermore, it is also indicated that that although Pakistan has a very vast structure of public health system which provides opportunities to the people to access qualified and skilled doctors and subsidized health services, the health outcomes are still very low. There are many factors causing this situation, mainly lack of financial resources, doctor absenteeism and poor monitoring of the utilization of health services (9).

Maternity care at hospitals is provided through separate unit or department in order to ensure competent and efficient deliverance of health services to mothers and newborns. Each hospital, either public or private, offers particular concentration in giving efficient healthcare services to the maternity care unit and keeping an eye on the availability of necessary equipment and specialized staff at the unit at all time. The provision of qualified care and its management demands competent human and adequate financial resources which can be the liability of the organization if taken lightly. Despite the paramount progress that has been made in Pakistan for maternity care, the mortality and morbidity rates reported by the hospitals are not declining to a large extent. Therefore, it is important to evaluate the delivery of healthcare services to examine the gap in the provision of health services.

Quality of care for mothers and newborns is more challenging and complex in nature as it involves timely and decisive care with high proficiency and competence by the providers. The outcome of maternity care (10) is not only the result of the availability of health facilities in terms of physical assets but also influenced by the services delivered by healthcare providers. But sometimes, despite the proficient provision of care, users are not satisfied because of extra use of medical intervention for care such as excess use of ultrasound during pregnancy or over-medication which is detrimental in maternity care.

The typology of quality care mentioned different aspects highlighted to study the diverse aspects of quality of care. Number of studies focused on patient's perception towards the provision of health care services by the system as well as by the providers. Raven cited Donabedian's approach of Quality of care that is based on the application of medical science and technology in such a manner that provides utmost affirmative outcomes for health and diminishes hazards (11). However, these studies mentioned the quality of care is the outcome of biomedical process of health services, but the social possessions of health care with the advancement of technological intervention is not taken into consideration to determine the quality of care.

It is analyzed that Donabedian's approach (11) of quality care for mothers and newborns has extensively been used in literature. It focuses on three aspects of provision of quality care i.e. structure, process and output. The structure or inputs are described as both the physical and human resources are for healthcare; the process involves activities performed by personnel to deliver healthcare, whereas outcome/outputs are the result of those activities. But the approach does not specify the role of medical intervention in quality of care. Thus, this also establishes a gap in earlier research which needs to be explored in future studies. Conversely, the outcome of medical interventions is furthermore influenced by the preference of these interventions by doctors and patients (12).

The process of measuring healthcare quality determines on whether a patient receives ample and efficient care. It is defined as the interaction and anything that is performed as part of the encounter between a doctor and a patient such as providing information, emotional support, as well as patient's involvement in the decision of treatment and curing process. Outcomes refer to a patient's satisfaction with the health status or improvement in the illness after receiving medical care. This also includes the cost benefit impact on the patient's health status. Besides the
process of healthcare delivery, satisfaction of maternity care at hospitals stretched out on the structure and milieu of the hospitals. Mothers were not satisfied with the structure and care process of the hospital in Brazil because of lack of beds, non-availability of doctors, not permitting family members to stay with them, misconduct by doctors and staff, inappropriate procedure of treatment, etc (13). Another study (5) mentioned six attributes to investigate the effectiveness of the quality of care from patients' perspective such as waiting time for consultation, doctor-patient communication, nursing communication, availability of medicines in the pharmacy inside the hospital, continuity of care and diagnostic and treatment facilities. Patient selection and preferences of healthcare are associated with their willingness to wait, patients' focused treatment and the quality of services delivered by the hospitals. Communication with doctors and nurses as well as availability of drugs and other diagnostic services contribute to the patients' satisfaction of healthcare services leading towards the preferences to access particular hospital.

Healthcare quality significantly impacts on patients' satisfaction with services as demonstrated by conducting a cross-sectional study on 400 hospital outpatients in Thailand (14). The study measured five indicators of service quality i.e. responsiveness, empathy, tangibility, assurance and reliability influence on quality of healthcare services. The findings of the study illustrate that tangibility and assurance were significant at the 1% significance level, and reliability, responsiveness and empathy was statistically significant at the 5% significance level. Similarly, another study investigated the quality of services delivered to patients by public hospitals in Pakistan on 369 respondents with the same abovementioned five dimensions studied (15). The findings indicate that although these indicators had strong relations between patients' satisfaction with public hospitals, due to inefficient resources and mismanagement the hospitals were not making evident exertions to provide quality services to their patients and were unable to encounter their desires and demands. In addition32 also illustrate significant relationship of patients' satisfaction with the provision of quality services at public hospitals in India.

By comparing the provision of quality of maternity care at public and private hospitals in Gambia, the study (16) illustrate women's satisfaction with maternity care as higher in private hospitals (99%) compared to public hospitals (76%). The study compared six public and six private hospitals by conducting a survey on 520 women who needed maternity care. The findings mention unhygienic physical environment, inefficient technical process and less information given to the women at public hospitals making the users feel less satisfied with the services. On the other hand, women who utilized healthcare at private hospitals felt more satisfied due to efficient care delivery by the providers and ample facilities related to physical environment, drugs and technical process available at these hospitals. The public hospitals need proper planning and management for utilization of services as well as provide training to the providers to develop effective communication with female patients.

In addition to the structure, process and outcome, cost effective and quality care also depends on the use of technology as well. The intervention of technology in medical sciences brings innovation and betterment to healthcare over the past few decades, but generally developed nations are getting benefits due to their affordability and social acceptability (17). On the other hand, due to lack of resources and capabilities to deal with these interventions, the developing world is out of its reach. Many of the health professionals do not know about the technology which can be used to improve the quality of care at hospitals. The scenario is more critical in maternity care as globally newborn mortality is attributed to lack of provision of medical technology in health systems, particularly in the developing world (18,19). Despite the lack of health technology in developing countries, essential medical technology based on medical devices for newborn care which at least must be available at health centers such as infant warmer, neonatal resuscitators, monitoring of oxygen saturation, assisted ventilation, weight or temperature assessment, etc (20).

Financial resources also play an important role in quality of healthcare services. To manage financial resources for healthcare is very challenging task for the developing countries. WHO Report (21) highlighted that every year 11% of the population in some developing countries suffers with lack of financial resources to fulfill their basic needs. The situation of Pakistan is worst in this matter as only 2.9% of GDP has been allocated to the health sector. Due to which physical infrastructure of health system is unable to execute the health care services to the entire population. To overcome the low budgetary allocation to health sector by the state, social security institution provides health insurance to the population belongs to lower socioeconomic class. Another study (22) evaluated the public sector health insurance services at social security hospital Islamabad. The study reported that quality of care has been provided to the insured poor population having income between 7000 to 1500 PKR. The workforce and users of social services hospital were satisfied with the quality care, availability of female doctors and good behavior of paramedical staff. All factors contribute in provision of quality healthcare services to attain healthier outcomes.

Beside all the above mentioned indicators of the quality of care, access to and utilization of healthcare (23) services also impacted on the patient's satisfaction with the quality of services. In most of the developing countries, majority of the women now have access to the public healthcare services but the utilization of the
The importance of the measuring quality of care can be studied in an interrelated manner. Quality of care, every aspect of the health system must be depicted of the factors contributing to the outcome of the system due to the influencing nature of one factor to another. Therefore, in order to have unambiguous unambiguous outcome of healthcare depends on all aspects of the healthcare system and experience of users are not only the result of the availability of the health facilities but also influenced by the providers. The outcome of the maternity care is challenging and complex in nature as it involves timely and decisive care with high proficiency and competence for mother and newborn is well address in the literature by quoting the relevant evidence from the research studies. Several models and frameworks provided the evidence and guidelines to assess the maternal healthcare quality in to improve the state of mother and newborn healthcare. As technology is the need of the time, the proposed model based on three major and number of sub-indicators can be used as predictors in quality management system in healthcare sector for improving maternal healthcare services.

**Recommendation**

It is recommended that the health system must be capable of having sufficient knowledge about the quality of care standard and advancement of technology. Hospitals may find ways to adopt these interventions to improve the quality of care.

**Declaration of Conflict of Interest**

The author(s) declared no potential conflicts of interests with respect to the research, authorship or publication of this article.

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PERCEPTIONS AND BEHAVIORS AMONG MOTHERS OF SEVERE ACUTE MALNOURISHED CHILDREN REGARDING FEEDING READY TO USE THERAPEUTIC FOOD LIVING IN RURAL KARACHI

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Abstract

Background: Kwashiorkor, and Marasmus are the two well known forms of Macronutrients deficiency. According to NNS 40% of Pakistani children of under five year are malnourished and 25% of babies are born under weight.

Methods: This was descriptive cross-sectional study conducted in rural Karachi.

Results: It is found that all children who have taken the RUTF for recommended period of time have improved their nutritional status. The nutritional progress implies and supports all previous studies in favor of RUTF. About caregivers' perceptions regarding RUTF treatment, interestingly, 38.5% offered other food to their children along with RUTF during the treatment period. The offered food was daily meals (70.1%), some special foods (3.9%), any other food (22.1%) and tonics (3.9%). About 35.3% of caregivers offered food without any reasons, 5.9% to boost up the recovery of child and 8.8% because of taking less RUTF by children.

Conclusions: It is concluded that being mothers they deviated from the advices of the health care providers and in spite of clear cut guideline of not offering any food during the treatment of malnourished children along with RUTF, except water or breast feeding (in case of breastfeed child).

Key Words: Community-based management of acute malnutrition, ready to use therapeutic food, knowledge & practices.

Introduction

Good nutrition is vital for national economy and social development along with human health. Nutritional status is the balance between the intake of nutrients and the consumption of these in the processes of growth, and health maintenance.

Burden of diseases' is an emerging problem of the world, specifically of developing world, and malnutrition is globally a major cause for it(1). Malnutrition is a range of conditions that occur when intake of one or more nutrients does not meet body requirement; it can be mild, moderate or severe and include multi-nutrient deficiencies(2). It impairs the physical, mental and behavioural development of an individual and has a long cascading effect that undermines the economic and social development of a country.

In many low and middle income countries childhood under nutrition is still a serious public health issue. It has been estimated that 1.7 to 3.6 million annual deaths recorded in these countries as a result of severe (SAM) and moderate acute malnutrition (MAM) respectively(3).

Ready to use Therapeutic Food (RUTF) has revolutionized the treatment of severe acute malnutrition. The arrival of RUTF makes possible the management of malnutrition in the community. This intervention for severely malnourished children has saved the millions of lives by increasing their weight remarkably in a shortest time span(4).

According to WHO and UNICEF Community Management of Acute Malnutrition programme (CMAM) protocol, along with RUTF no food is allowed to give except breast feeding and water as per age of the severely malnourished child. But RUTF ration of a fixed duration is handed over to caregivers to feed the child accordingly at their homes. Caregivers are very sensitive towards their children so there is a chance and possibility that if the child refuses eating RUTF, they may violate the protocol and give other food to the child. This
humble act may disturb the recovery period of the child or efficacy of the RUTF.

The recovery rate of children with severe acute malnutrition (SAM) has greatly improved by the ready-to-use therapeutic food (RUTF) in sub-Saharan Africa (5). In home-based therapy of SAM recovery rates increased from 25-50% to 80-90% by RUTF use; it has been adopted as the standard of the joint United Nation’s agency for treated uncomplicated SAM (6).

According to WHO it is estimated that globally nearly 20 million children are severely malnourished, most of them belong to south Asia and sub-Saharan Africa. Every year 1 million child deaths are contributed by severe acute malnutrition. Due to severe acute malnutrition (SAM) case fatality rate for less than five children typically ranges from 30-50%. According to NNS-2011 of Pakistan the prevalence rate of acute and chronic malnutrition in children less than five year are as under:

<table>
<thead>
<tr>
<th>Malnutrition Condition</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stunting</td>
<td>43.7%</td>
<td>36.9%</td>
<td>46.3%</td>
</tr>
<tr>
<td>Wasting</td>
<td>15.1%</td>
<td>12.7%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Underweight</td>
<td>31.5%</td>
<td>26.6%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>


Among less than five year children malnutrition is directly or indirectly responsible for 35% of child deaths (4). Globally, malnutrition is estimated to contribute to >33% of all child deaths. An estimated 3.34 million children of <5 years are malnourished in Pakistan. In Sindh about 50% children of <5 yrs are malnourished (4).

Research suggests that the studies were conducted on therapeutic effectiveness of the RUTF in various situations and circumstances. There were many alternatives of RUTF that were utilized in treatment of SAM children. This treatment is home based so there is a chance that the caregivers deviate from the protocol and guidelines of treatment that may play a significant role in time and quality of treatment. The purpose of this study was to find out this gap, whether the caregivers deviate from the advices, guidelines or protocol given by health care providers or not.

**Methodology**

A descriptive cross-sectional study. The target population for the study was caregivers (mothers) of severely acute malnourished (SAM) 6-59 months aged children enrolled in Outpatient Therapeutic Programme (OTP) for the treatment. Over all 1561 SAM children were enrolled in OTP centres for treatment on the basis of MUAC reading (<11.5 cm). Out of it 60 children were defaulted (as per RUTF treatment guideline, i.e., not return for 2 consecutive follow up visits) so they were excluded from the randomization process. For the study, randomly 200 SAM children were selected from these 1501 children and their caregivers were contacted for taking their responses on questionnaire.

**Flow Chart of the Study**

Research questionnaire, used by Engy Ali et al (8) in their study, was derived and modified for the study. A draft questionnaire was administered to the mothers of non selected OTP site. On the basis of pilot study few changes had been made for easy understanding, fluent asking and getting accurate responses of the questions. For example, economic status, number of siblings and how did they fed RUTF etc. As a result the final questionnaire had been rephrased and re-sequenced.

Selected 200 mothers were approached through trained Research Assistants and their responses were recorded through interviews on structured questionnaires, after getting written consent. The issues of reliability and validity were addressed through available OTP centres data, pre-testing of the questionnaires and pilot testing. Issue of biasness was addressed at all level and to keep impartial, randomization was done as per protocol.

**Results**

About 200 caregivers were interviewed to assess their knowledge and practices regarding their beliefs, understanding, RUTF treatment and abiding by the advices of HCPs. After analysis of various categories of responses following understanding were developed:

From the sample of 200 caregivers only 1% caregivers were aunts while remaining all were mothers of the treated children.

About 43% caregivers were illiterate, 10% were able to read (literate), 20% primary, 20% metric, 6% Inter and 0.5% graduate.

In the sample about 88.5% caregivers were house wives and 11.5% were working women.
About 79% caregivers were living in joint family system and 21% were separate families. 

**Socio-demographic Information Summary:**

<table>
<thead>
<tr>
<th>Literates</th>
<th>Illiterates</th>
<th>Working women</th>
<th>House wives</th>
<th>Joint Family System</th>
<th>Separated</th>
</tr>
</thead>
<tbody>
<tr>
<td>57%</td>
<td>43%</td>
<td>11.5%</td>
<td>88.5%</td>
<td>79%</td>
<td>21%</td>
</tr>
</tbody>
</table>

According to 153 (76.5%) caregivers they were confident that RUTF alone is enough for the treatment of malnourished children while 47 (23.5%) caregivers were thinking that RUTF alone is not enough for treatment of their malnourished children.

Over all out of 200 respondents about 77 (38.5%) caregivers offered other food along with RUTF during treatment and 70.1% of them offered daily meal to their children; while 123 (61.5%) didn't offer any food during treatment. About 99.2% out of 123 caregivers have done this in compliance of advice of health care providers during the whole period of 6 months treatment.

**Discussion:**

There were 12 OTP sites established in 12 UCs of 5 towns of Karachi. In these centres 1561 SAM children were enrolled and 1501 children were cured after getting treatment (RUTF). The children were assessed for SAM through MUAC measurement and < 11.5 cm was the cutoff point of admission in the programme. They were provided RUTF according to their weight for a period of 1 - 8 weeks. Follow up visits were made after 1 or 2 weeks. To evaluate the knowledge, beliefs and feeding practices related to health care providers' advices an interview based questionnaire was adopted and formulated.

The purpose of this study was to find out whether the caregivers deviate from the advices, guidelines or protocol given by health care providers or not.

Socio - economic and demographic statistics are quite obvious and no any remarkable differences were shown. Majority of them were either illiterate or informally literate. That's way there was no role of education level of caregivers on perception. Majority are housewives and living in joint family system. That means they have sufficient time and support for caring and also there were chances to get advices from elders and peer mothers. But no one told that they were influenced by peers or family members.

No any previous study about knowledge and practices regarding RUTF were found to compare the results. According to the present study, about caregivers' perceptions regarding RUTF treatment, interestingly, 38.5% offered other food to their children along with RUTF during the treatment period. The offered food was daily meals (70.1%), some special foods (3.9%), any other food (22.1%) and tonics (3.9%). About 35.3% of caregivers offered food without any reasons, 5.9% to boost up the recovery of child and 8.8% because of taking less RUTF by children.

It is very interesting that 35.3% of caregivers offered food without any reasons, 5.9% to boost up the recovery of child and 8.8% because of taking less RUTF by children.

It is concluded that mothers are always in love with their children so the deviate from the advices of the health care providers. In spite of clear cut guideline of not offering any food during the treatment of malnourished children along with RUTF, except water or breast feeding (in case of breastfeed child), 38% caregivers offered other food side by side to the under treatment malnourished children. It is worth mentioning that majority of caregivers offered daily meal to their children. It emphasizes that if caregivers will be counseled about importance of daily meal in reduction of malnutrition,
problem of malnutrition will be decreased. About 99% of caregivers adhered with health care providers advices and did not offer any food to their under treatment children. It reveals that the effective communication keeps them abide by the advices.

References
STRESS AMONG BACCALAUREATE NURSING STUDENTS AT A PRIVATE NURSING COLLEGE OF ISLAMABAD: A CROSS SECTIONAL STUDY

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Abstract

Background: Stress is an unavoidable matter in daily life which could cause an assortment of mental and psychological special effects on an individual. Nursing students experience stress due to various stressors during duties in clinical settings but also experience stress in their theory classes, academic, personal and social environments.

Methods: A descriptive, cross-sectional design was conducted on 200 nursing students of Baccalaureates program (BSN & PRN) at a private nursing college of Islamabad. A self-administered structured questionnaire was adapted with some modification. Students Stress Tool (SST) was utilized to collect from purposively selected nursing students. Written informed consent was taken by the researchers before data collection. Data was analyzed by using SPSS Version 20.00.

Results: Overall 2.36% (5) had severe stress, 82.08% (174) had moderate stress and 15.57% (33) had mild level of stress. Classroom category is more stressful for the students as the mean is 2.73 (SD = 0.82) than other components. BSN Year-IV students have overall significantly moderate level of stress (Mean: 2.66, SD: 0.98) as compare to other BSN and PRN class students. Martial and job status was not significantly associated as stressor in this study.

Key Words: Stress, stressors, academic stressors, nursing students, nursing education.

Introduction

Nursing as a health care profession is very challenging job(1) and to meet the expectations of the profession, nurses required to complete very tough study consisting of theoretical and clinical components. Nursing is in one of the rapidly growing professions in Pakistan. Four years Generic BSN and two years Post-RN BSN programs are offered in different public and private nursing colleges followed by curriculum is designed by the Higher Education Commission and Pakistan Nursing Council to meet the national and international standard of nursing profession(2). Modifications and implementation of nursing curriculum lead to a more course burden. It has made content more complex and challenging not only in theory but at clinical too. It has ultimately lead to a more competitive and stressful learning environment for nursing students (3). Stress is an unavoidable matter in daily life(4) which could cause an assortment of mental and psychological special effects on individual(5). In small amounts it is good, because it pushes to work hard and do the best. Education and learning are measured as stressful experience (6) and nursing students remember the clinical education courses as the most stressful(6).

Nursing students face stressors during duties in clinical settings but also experience stress in their theory classes and academic, personal and social environments(7). Stress can be harmful to individuals and might cause physical and psychological problems(8). This psychological distress might affect students’ academic performance and hence discourage them to continue the nursing as a career(9).

It is identified that students with elevated levels of stress have difficulty in their education, which could direct to a range of mental and physical health related problems(10). On the other hand, low levels of stress were discovered to be an inspiration for the students(11). The literature has described several factor-associated with stresses in nursing students basically include: 1) academic-related factors such as workload, lack of knowledge, examination, teaching style; 2) clinical practice for example, lack of competence, taking care of death and dying, shifting, supervision, assessment; 3) relationships with others.
A systematic review related to sources of stress in nursing students revealed that major sources of stress could be academic aspects (e.g., workload and study related problems) or clinical aspects (e.g., fear of unknown clinical challenges and handling of technical equipment, etc).)

A study in Ghana found that all students experience equal number of stressors irrespective of their gender, level of education and residential status except married students have more stressors than unmarried students. In addition, study indicated that students described academic stressor as source of stress more than other stressors. An Iranian study presented most common stressors faced by the nursing students are interpersonal stressors (e.g., finding new friends) and environmental stressors (e.g., working with unfamiliar people). Similarly studies found clinical experience, learning experience and course structure, financial, personal, professional and academic factors related to stress in nursing students. A study of Nepal found four stressful events identified by nursing students were: interpersonal relationships (50% reported), initial experiences, feeling helplessness, and demeaning experiences.

One study reported mean stress level 3.8 out of 5 in nursing students. A study from Pakistan found 28.00% had severe, 71.60% moderate and 7.40% low stress level and other revealed 61.60% mild, 33.90% moderate and 4.50% severe stress in medical students.

Some studies have been conducted on medical and basic science students in Pakistani context but existing evidence indicates that nursing students have higher levels of stress than students in other disciplines; pharmacy students, physical therapy students, and students in dentistry, medicine, and graduate school, but stress varies at different education levels of nursing students and different nursing programs. Existing studies stated that third year students' level of stress is higher, and the senior year students' have high mean score of depression. Many studies reported that second year students complain about high course burden and high level of stress and stress related factors.

According to literature, studies probing stress and stress related factors in nursing students are mostly conducted in western cultures but few researches has been done in eastern cultures. Although nursing students in general, may share similar concerns and stressors which may possibly be related to educational, clinical, social and personal environment however, cultural beliefs and situational factors could also affect their levels of stress and its perception. Therefore, current study was planned to assess nursing students' perceived stress, and stress related factors in during different academic years of study in a private nursing college of Islamabad-Pakistan.

Methodology: A cross-sectional descriptive study was conducted from July to December, 2016. The population of the study included Baccalaureate nursing students (BSN) of Year-II, Year-III, Year-IV, PRN-I and PRN-II enrolled at Shifa College of Nursing during the 2014-2015 academic years. First year students were excluded since they had limited clinical experience prior to collection of data. Census/Universal method sample size calculation was used to estimate the 200 nursing students as participants. Purposive sampling technique was used to select the study participants. The inclusion criteria for participation included nursing students who were enrolled in generic or Post-RN BSN program at Shifa College of Nursing. First year students because they did not have experience in clinical were excluded. The researchers’ distributed the self-administered questionnaires to 200 students and collected those back after completion by nursing students. Students Stress Tool (SST) developed and validated by David L. Tobin by 1984 was used for data collection. A written permission was taken prior to use this tool in this study by researchers. The tool consists of five domains like Nursing theory, Nursing Clinical Experience, College Class rooms Labs and other than Nursing, College Environment and Social/personal environment in relation to attending school which consist of 43 questions. Each question is described by a 5 item Likert scale. The completed questionnaires was checked for errors, edited, cleaned, coded and data was entered into SPSS Version 20.0 for statistical analysis. The descriptive analysis include proportions of the categorical variables e.g. gender, relationship status etc and ordinal variable e.g. education level expressed as percentages and means and standard deviations of quantitative variables such as age etc. This study was approved by institutional review board (IRB) of Health Services Academy Islamabad. The principle investigator asked for the permission in writing from the Principal Shifa College of nursing Islamabad well as Institutional Review Board (IRB) Shifa International Hospital.

Results: Estimated sample for this study was 200 nursing students but data from 212 participants was collected. Final analysis was done on the basis of 212 participants. Students Stress Tool (SST) measured the levels of stress produced due to stressors on criteria of Likert scale ranging from 1-4. Details are shown in, table-1.
Demographic Characteristics of Participants
Mean age of the participants was 23.96 (SD = 3.59) years. Gender of the participants was male 43.10% (91) and females 56.9% (120). Majority of the participants were 56.13% (119) non-working and 43.87% (93) working. 12.73% (27) participants were married and 87.27% (185) were unmarried. Class wise data indicated that PRN Year-I on the top (61) followed by the BSN Year-III & IV (42 and 43 respectively). Class wise detail of the participants is given in Fig.1.

Stressor analysis:
Data was analyzed for different categories of stressors like stressors related to theory, clinical experience, class room, college environment and social/personal environment. To explore the stress level among students of different classes and category wise comparison was also done.

Overall 2.36% (5) had severe stress, 82.08% (174) had moderate stress and 15.57% (33) had milde level of stress. Class room category is more stressful for the students as the mean is 2.73 (SD = 0.82) than other components. BSN Year-IV students has overall significantly moderate level of stress (Mean: 2.66, SD: 0.98) as compare to other BSN and PRN class students. BSN Year-III students have higher value in nursing theory with mean 2.37 (SD: 0.94) followed by BSN Year-IV (Mean 2.37, SD: 0.95), BSN Year-II students score high in clinical experience category (Mean 2.62 SD: 0.91) and BSN Year-IV students mean score is high in class room with mean 2.99 (SD: 0.62), college environment with mean 2.69 (SD: 1.04) and social/personal environment mean score is 2.77 (SD: 1.10). Table 2. shows the mean score with standard deviation in each category overall and in each class.

Comparison of marital status, job status and stressor category:
Result of marital status indicated that unmarried students have high value of stress score (Mean: 2.48, SD: 0.85) as compared to married students. Married students mean score is high in class room category (Mean: 2.80, SD: 0.72). Unmarried student reported high score in nursing theory with mean 2.37 and standard deviation 0.07.

Stressor category was compared with job status which pointed out that non-working students have high value of stress score (Mean: 2.51, SD: 0.96) as compared to working students. Working students have more stress (Mean: 2.81, SD: 0.72) in class room category and non-working have more stress (Mean: 2.47 SD: 0.95) in clinical experience category. Category wise mean score with marital and job status is presented in table 3.
stressors caused extreme stress.

Being observed by the instructor or clinical teacher is common stressor reported by the students with mean score 2.50 (SD: 0.91) followed by fear of exposure to infectious diseases or patients in clinical experience category. Most of the stressors (66.67%) produced moderate stress.

College class rooms and labs other than nursing category indicated high value of mean in various stressors like very high in excessive work load (Mean 3.38, SD: 0.84) followed by competition with other students, preparing for examination and presentation of content in examinations with mean 3.19 (SD: 0.79), mean 3.18 (SD: 0.65) and mean 3.17 (SD: 0.73) respectively. In this category high percentage of stressors (28.57%) caused extreme stress as compared to other categories.

Common stressor of college environment category is purchase of text book and other material with mean score of 2.62 (SD: 1.11).

Fatigue/energy level is accounted for stress in students as the mean score is 2.87 (SD: 0.96) followed by the family responsibilities with mean 2.82 (SD: 1.13) in social/personal environment in relation to attending school category.

All the stressors (100%) caused moderate stress in college environment and social/personal environment in relation to attending school category.

Details of frequency and percentage of stressors and level of stress shown in table 4.

Table 4. Frequency (%) of stressors and level of stress

<table>
<thead>
<tr>
<th>Category of Stressors (number of stressor)</th>
<th>Level of Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all stress</td>
</tr>
<tr>
<td>Nursing Theory (13)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Nursing Clinical Experience (17)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>College Class rooms and Labs Other than Nursing (14)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>College Environment (7)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Social/personal environment in relation to attending school (9)</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

Discussion:
Overall 2.36% (5) had severe stress, 82.08% (174) had moderate stress and 15.57% (33) had mild level of stress. Class room category is more stressful for the students as the mean is 2.73 (SD = 0.82) than other components. BSN Year-IV students has overall significantly moderate level of stress (Mean: 2.66, SD: 0.98) as compare to other BSN and PRN class students. This study finding indicated 82.08% had a moderate level of stress which is high than 71.60% (18) and 33.90%(19). Sever stress (2.36%) findings are less as compared to 28.00% (18) and 4.50%(19).

Class room, personal/social environment, work load, preparing for examinations, fatigue/energy level, purchase of books, evaluation by teacher and competition with other students were mostly reported stress factor in this study which is consistent with the two studies which reported environmental, intrapersonal, interpersonal factors as factor for stress in nursing students(30, 31). Another study results presented environmental factors, new college environment, student abuse, tough study routines and personal factors are major factor associated with stress in medical students (32).

BSN Year-IV students have more burden of study as compared to other students which might have affected their social environment and intensified the class room and college environment.

BSN Year-II students reported high score in clinical experience. This might be because these students have more clinical hours during the year and exposure to the clinical areas is new for them. In contrast to this PRN Year-I & II have low score in clinical experience category this might be because these students as registered nurses have exposure and experience in clinical areas.

Marital and job status is not significant stressor in this study. This finding might not be true due to large number of student who belongs to unmarried and non-working categories. Study of Ghana revealed married students have more stressors than unmarried students(14).

No significant difference in stress level is found within gender, probably because of unequal ratio of males and females. This result is similar to the results of Ghana study (1).

As far as the nursing programs are concerned, various research findings indicate that stress exists for students in both the clinical and academic aspects of the program. Findings from previous studies support the results of present study of high level stress in the clinical factor among 4th year students that stress from clinical responsibilities persisted as a source of stress during all years of study (3, 15).

It was found that 4th year BSN student’s experienced greater stress in every component than students of other classes. As the students’ progress from 3rd year to 4th year, the work burden remarkably increases in terms of teaching nursing theory and nursing clinical significantly into critical care areas of the hospital. All these stressors lead to compromised social and personal life of the students. That is the reason why the 4th year BSN students have reported the extreme level of stress in social/personal environment in regard to other BSN classes.

Conclusion:
It is evident that students are experiencing moderate level of stress, which is significantly affecting their academic performance. It has been analyzed that most of the stressors encountered by the students are related to educational and clinical environments. These stressors can be modified to help students learning. This
study highlights the findings from major stressor in nursing students which might help the nursing institute to work in lowering stress related factors. Further coping strategies and effectiveness of stress reducing interventions needs to be studied.

**References**

2. Higher Education Commission, Curriculum of Nursing 4-year degree program, curriculum division-Islamabad, 2010
4. Lewis L., W., Timby, B. K., Fundamental Skills and Concepts in Patient Care, Published by Lippincott Williams & Wilkins, 1996.


REPORTING TYPE 2 DIABETES MELLITUS AMONG THE COMMUNITY LIVING IN RURAL AREAS OF DISTRICT GUJRAT, PAKISTAN

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Abstract

Background: Type 2 diabetes mellitus consists of an array of dysfunctions characterized by hyperglycemia and resulting from the combination of resistance to insulin action, inadequate insulin secretion, and excessive or inappropriate glucagon secretion. The symptoms of Type 2 diabetes mellitus are high blood sugar include frequent urination, increased thirst, and increased hunger. If untreated, it can cause diabetic ketoacidosis and non-ketotic hyperosmolar coma, cardiovascular disease, stroke, chronic kidney failure, foot ulcers and blindness.

Method: This study was conducted at Community of Village Shakreela Sharif, Tehsil Sarai Alamgir, District Gujrat Pakistan. Convenient sampling technique was used in the community by recruiting 200 people to collect the Blood samples and a Self-structured questionnaire containing close-ended questions in English language was used to obtain knowledge regarding type 2 Diabetes Mellitus through an informed consent. Data Analysis was analyzed in SPSS version 17.

Results: Out of 200 participants, 67 patients had diabetes. 56.6% of the male and 51.25% of the females from the sample population surveyed have been diagnosed with Diabetes mellitus. 54% of the sample population had relatives who were diagnosed with Diabetes mellitus. 65% of the sample population had high blood sugar. Only 63.5% of the participants had previously checked their blood sugar level. 27.5% were shown to have Hypertension. 56% had high blood pressure and 62% of the total sample didn't know their blood pressure.

Conclusion: As diabetes mellitus rises within Pakistan, the importance of self-management education in diabetes mellitus is the key success in controlling the growth Disease. Preventive techniques are required by the patients and should be provided by the health care professionals in order to secure a better quality of life for the patients. Key words: Screening, type 2 diabetes mellitus, community, knowledge.

Introduction:
Diabetes mellitus (DM), commonly referred to as diabetes. It is a group of metabolic diseases in which there are high blood sugar levels over a prolonged period. Symptoms of high blood sugar include frequent urination, increased thirst, and increased hunger. If left untreated, diabetes can cause many complications (1). Acute complications include diabetic ketoacidosis and non-ketotic hyperosmolar coma. Serious long-term complications include cardiovascular disease, stroke, chronic kidney failure, foot ulcers, and damage to the eyes (2).
Diabetes is due to either the pancreas not producing enough insulin or the cells of the body not responding properly to the insulin produced. There are three main types of diabetes mellitus:
Type 1 DM results from the pancreas' failure to produce enough insulin. This form was previously referred to as "insulin-dependent diabetes mellitus" (IDDM) or "juvenile diabetes" (3,4). The cause is unknown. Type 2 DM begins with insulin resistance, a condition in which cells fail to respond to insulin properly. As the disease progresses a lack of insulin may also develop. This form was previously referred to as "non-insulin dependent diabetes mellitus" (NIDDM) or "adult-onset diabetes". The primary cause is excessive body weight and not enough exercise (5-7).
Gestational diabetes is the third main form and occurs when pregnant women without a previous history of diabetes develop a high blood sugar level (8,9).

Methodology And Material:
This descriptive study was conducted at Community of Village Shakreela Sharif, Tehsil Sarai Alamgir, District Gujrat Pakistan. Convenient sampling technique was used in the community by recruiting 200 people to collect the Blood samples and a Self-structured questionnaire containing close-ended questions in English language was used to obtain knowledge...
regarding type 2 Diabetes Mellitus through an informed consent. Data Analysis was analyzed in SPSS version 17.

This descriptive study was conducted among at Community of Village Shakreela Sharif, Tehsil Sarai Alamgir, District Gujrat Pakistan. Total of 200 participants were included in the study. A structured self-questionnaire was developed which was led by the participants. Data entry and analysis was done by using Statistical Software SPSS 17 and informed written consent had been taken from respondents. Confidentiality of data was ensured.

Results:
Out of 200 participants, 67 patients had diabetes and 133 were normal. Among the diagnosed 56.6% of the male and 51.25% of the females. From Diagnosed patient 54% of the sample population had other relatives who were also diagnosed with Diabetes mellitus. 65% of the sample population had high blood sugar. Only 63.5% of the participants had previously checked their blood sugar level. 27.5% were shown to have Hypertension. 56% had high blood pressure and 62% of the total sample didn’t know their blood pressure.

Table 1: Gender wise distribution of various blood groups

<table>
<thead>
<tr>
<th>Blood Type</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>A-</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>B+</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>B-</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>AB+</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>AB-</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>O+</td>
<td>18</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>O-</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>19</td>
<td>67</td>
</tr>
</tbody>
</table>

Table 2: Prevalence of diabetes among respondents

<table>
<thead>
<tr>
<th>Diabeete</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>67</td>
<td>33.5%</td>
</tr>
<tr>
<td>No</td>
<td>133</td>
<td>66.5%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3: Positivity of family history among diabetic respondents

<table>
<thead>
<tr>
<th>Family History</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>109</td>
<td>54.5%</td>
</tr>
<tr>
<td>No</td>
<td>91</td>
<td>45.5%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Discussion
Overweight patients with diabetes should lose 5%-7% of their initial weight, irrespective of its value (6). For overweight people with diabetes, weight loss improves insulin sensitivity and glycemic control and even moderate intentional weight loss may be associated with reduced mortality (7). Weight loss also improves lipid profiles and blood pressure as well as mental health and overall quality of life. These benefits, while significant, are clinically meaningful only if weight loss is sustained over time. Weight loss diets with low levels of carbohydrate and high levels of protein are gaining in popularity (8).

A high-protein diet (40% carbohydrate, 30% protein, and 30% fat) to a high carbohydrate diet (55% carbohydrate, 15% protein, and 30% fat) in patients with type 2 diabetes. Patients in both groups lost weight (2.2 and 2.5 kg, respectively). However, mean A1c and post prandial plasma glucose decreased significantly (p <0.05) only in the patients with type 2 diabetes on high protein diet (9,10).

Regular exercise promotes long-term weight loss (11), provided that the regimen is habitual and consistent. Exercise can lower blood glucose, improve the body’s ability to use glucose, and decrease the amount of insulin needed.

However, as those with type 2 diabetes generally have a lower level of fitness than non-diabetic individuals, exercise intensity should be at a comfortable level in the initial periods of training and should progress cautiously as tolerance for activity improves (12).

Lifestyle changes such as those outlined above can be discussed with patients in group therapy sessions (13). Regular meetings with patients, possibly involving psychologists and dietitians, can help reinforce and encourage patients to continue with their diet and exercise programs.

Psychologists can help in this setting by introducing behavioral therapy aimed at improving a patient’s body image and attitude to eating (14).

Self-management is an essential element of health in people with type 1 and type 2 diabetes. Nurses and dieticians regularly address barriers to successful self-care by identifying specific areas of self-management for improvement and setting realistic goals with the patient regarding food, medications, and insulin (15,16).
A comprehensive assessment of the barriers to self-care can recognize precise areas with which the patient may need encouragement and help. Awareness of these barriers can be used to tailor the educational material received from nurses and dietitians, incorporating information and learning about these barriers can support the patient’s diabetes control and care (16-17). These ongoing, tailored self-management interventions should be integrated into routine care as they prove useful in the continuing education of the patient (18,19). The complementary nature of self-management education to diabetes clinical goals as set by the entire patient care team (including the patient, their physician, a nurse practitioner, a nurse educator, a dietitian, and, if possible, an exercise physiologist) is very constructive and can have results of surprisingly great impact; (20,21) these results tend to strengthen as the relationship between the patient and the team strengthens. For example, as little as a brief self-management program aimed at helping patients to adopt low-fat eating patterns and increase physical activity levels via motivational interviews and follow-up phone contact with their patient care team has reported good success in weight Diabetes Mellitus maintenance (21). A similar study focused on improving self-care behavior in diabetes has reported both weight loss and improvements in both healthy eating and glycemic control (21).

**Conclusion:**

As diabetes grows within Pakistan, the importance of diabetes self-management education is the key to success in controlling the growth of diabetes mellitus. Prevention techniques are required by the patients and should be provided by the health care professionals in order to secure a better quality of life for our patients.

**References**

7. Joslin Diabetes Center & Joslin Clinic. Clinical Guideline for Adults with Diabetes. 10/20/06.
ASSESSMENT OF WEANING PRACTICES AMONG WORKING MOTHERS IN ISLAMABAD

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Abstract

Background: Weaning is the passage of transfer the infant gradually and progressively from the breast-feeding to the usual family diet. During weaning, the infant gets accustomed to foods other than breast feed. Weaning foods are given in addition to mother's milk when the amount of breast milk is inadequate also. A cross sectional study was carried out among the 106 working mothers.

Methodology: A cross sectional study was carried out among the 106 working mothers. Data was collected by survey through structured and pretested questionnaires. It was analyzed by using the statistical software SPSS 20 version

Results: Most (83%) mothers were gave other diet with breast milk And 18 (17%) mothers did not give other diet with breast milk to their children. There is significant association between the income of mother and weaning practices of the mother because the p-value (0.001) is <0.05, similarly there is significant association between the mother's education and weaning practices of the mother as well.

Conclusion: It is concluded that participated mother's practices and knowledge about the weaning were well who were higher educated and have reasonable income as compared those whose education level was low with economical base and have limited excess to the recourses.

Key Words: Assessment, weaning practices, working mother.

Introduction:
Weaning is the passage of transfer of the infant gradually and progressively from the breast-feeding to the usual family diet. During weaning, the infant gets accustomed to foods other than breast feed. Weaning foods are given in addition to mother's milk, when the amount of breast milk is inadequate also. Weaning food is started at the age of 4-6 months. Because the baby is accustomed for nourishment other than the breast feed (1).

The weaning process begins the first time when the baby takes food from a source other than mother's milk - whether it's formula milk from a bottle or mashed banana from a spoon. Weaning is the gradual replacement of breast feeding with other foods and ways of nurturing. Weaning was considered a joyous occasion for parents because a weaned child valued as a fulfilled child; a child was so filled with the basic tools of the earlier stages of development that he/she graduated to take on the next stage of development more independently (2).

Weaning, an infant from breast feeding to complementary food is a common cultural practice, which plays vital role in the child's milestone for growth and development. The right practice of weaning is necessary to prevent from various health related complications like allergy, diarrhea and choking further more delayed weaning may result in nutritional deficiency, protein energy malnutrition and, childhood illness, developmental delay stunting and sometimes even death (3).

The only fall back of weaning culture was inadequate knowledge regarding the type of weaning food and the use of over diluted and overcooked weaning foods among these low socio-economic families coupled with socio-cultural factors (various myths and taboos) compounded the feeding problem (4).

The aim of the study is to improve the knowledge, attitude and actual practices of weaning food among the mothers of children having < 3 year; and object was to assess the awareness about the weaning practices among the working mothers of Islamabad (urban sector) having children <3 years, following the
guidelines for weaning foods suggest that weaning foods given should have characteristics according to nutritional needs, appropriate textures and viscosity and appropriate forms (liquid, semisolid, solid) to support mental and physical development (5).

According to the UNICEF’s Pakistan National Nutritional Survey 2011. It was observed that children living in low- and middle-income (fourth wealth quintile) urban areas, are not food-insecure also have high stunting rates, and an estimated 23% of the population of Pakistan has been classified in this quintile, and could benefit from appropriate feeding advice through a variety of communication strategies (6).

We have observed that children living in low- and middle-income (fourth wealth quintile) urban areas that are not food-insecure also have high stunting rates (7).

In many developed communities, initial food which one introduce to the child as weaning foods are cereals (fortified), follow the fresh fruit, meat, vegetable and fish contain food product. But for developing countries these are out of reach of the most families because they are mostly too expensive to buy. The one favorable feeding option is to use homemade diets which are easy to prepare, affordable and easily available recommended option of feeding (8).

The knowledge attitude and practices of mothers, regarding complementary feeding is poor and defective. Therefore there is a need to educate mothers to ensure better growth and development of children (9).

Exact effects of weaning method depend on preference of food, child age and health of the child in early stage (10). Weaning guidelines recommend the introduction of solid food at or around 6th month of the baby age. The evidence suggests that knowledge of the guidelines is high, although only a small minority of parents waits until 6 months to wean (11).

Recent studies suggest that the method of preparation of complementary feed is linked to diet quality and later eating behavior however, results are inconsistent: in a cross-sectional survey of families receiving governmental benefits, those infants fed commercial complementary feed consumed a larger variety of fruits and vegetables at 7 years (12). Within the prospective Avon Longitudinal Study of Parents and Children, participants who were fed home-cooked fruits and vegetables at 6th month were more likely to show an increased intake and variety of fruits and vegetables at 7 years (13). An association between consumption of commercial complimentary in infancy and lower intelligence quotient scores in childhood has also been resulted and proven from the different studies (14).

**Methodology**

It was a Descriptive cross sectional study conducted in Government Girls schools (urban sector) of Islamabad. Study participants included Working mothers,(Girls school teachers) having children of age less than 3 years. Duration of the study was Three months. September 2015 to November 2015. For sample size collection prevalence (p) was assumed 50% .Confident interval was 95% (z=1.96) and Q was 1-p. margin of error is assumed to be 10% on the basis of this my sample size was 96, additional 10% added for refusals the total sample size was 106. Simple random sampling method was used for sampling of the study. Data was collected by survey through structured and pretested questionnaires. The data regarding participant’s demography and weaning practices has been collected from the mothers on pre-designed and pre-tested questionnaire. This questionnaire was translated into native language for the convenience of participants, questionnaire was pilot tested. After approval of topic by internal review board (IRB) of health services academy Islamabad, written permission was sought from Executive Director Health Services Academy Islamabad, and Director General Education of city district (Islamabad), for further proceeding on the thesis. Meeting has been held with principal/Head Mistress of the schools, after that with the permission of schools administration, with the consent of participants the questionnaire was distributed individually and collected on the next day with the help of trained female data collector. Data collection tool was adopted from IYCF standard tool, modified and developed, after the literature review, guide line of supervisor and consultation of expert in the field. The tool consisted on demographic phase and other components such as weaning food practices weaning food knowledge of mothers who had children <3 years old. Study variables were Age of respondent, Residence/location, Religion, Race, Family size, Family income, Nature of job of respondent, Educational status of mother, Educational status of father, Socio-economic status and Sex of child. After collection of data, it was analyzed by using the statistical software SPSS 20 version. Frequencies, proportions and charts have been made for categorical variables and chi-square and appropriate statistical test has been used for continuous data.

After approval of topic by internal review board (IRB) of health services academy Islamabad, written permission was sought from Executive Director Health Services Academy Islamabad, and Director General Education of concern city district (Islamabad), for further proceeding on the thesis.

**Results**

Most (83%) mothers were gave other diet with breast milk And 18 (17%) mothers did not give other diet with breast milk to their children. There is significant association between the income of mother and weaning practices of the mother because the p-value (0.001) is <0.05, similarly there is significant association between the mother's education and weaning practices of the mother as well (tables 1 & 2).
Table 1: Demographic, Frequency, Percentages

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Age (Months)</td>
<td></td>
<td></td>
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<tr>
<td>0-5</td>
<td>16</td>
<td>15.1</td>
</tr>
<tr>
<td>6-23</td>
<td>72</td>
<td>67.9</td>
</tr>
<tr>
<td>24-35</td>
<td>18</td>
<td>17.0</td>
</tr>
<tr>
<td>Gender (Child)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>55</td>
<td>51.9</td>
</tr>
<tr>
<td>Female</td>
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<td>48.1</td>
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<td></td>
<td></td>
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<tr>
<td>20-30</td>
<td>28</td>
<td>28.3</td>
</tr>
<tr>
<td>31-40</td>
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<td>41-50</td>
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</tr>
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<td>&lt;6</td>
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</tr>
<tr>
<td>7-10</td>
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<td>0.9</td>
</tr>
<tr>
<td>11-15</td>
<td>10</td>
<td>9.4</td>
</tr>
<tr>
<td>16-20</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>&gt;20</td>
<td>78</td>
<td>73.6</td>
</tr>
<tr>
<td>No of persons living in the house</td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>18.9</td>
</tr>
<tr>
<td>4-5</td>
<td>50</td>
<td>47.2</td>
</tr>
<tr>
<td>6-8</td>
<td>29</td>
<td>27.4</td>
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<tr>
<td>&gt;8</td>
<td>7</td>
<td>6.6</td>
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<tr>
<td>Mother’s Education</td>
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<td>Metric</td>
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<td>Intermediate</td>
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<tr>
<td>Master</td>
<td>73</td>
<td>68.9</td>
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Table 2: Frequency and percentage of weaning practices

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>-When, started other diet with breast milk (CHILD)</td>
<td>6-5months</td>
<td>23</td>
</tr>
<tr>
<td>6-24months</td>
<td>63</td>
<td>59.4</td>
</tr>
<tr>
<td>25-35months</td>
<td>20</td>
<td>18.9</td>
</tr>
<tr>
<td>-diet with breast milk to the, (CHILD)</td>
<td>Yes</td>
<td>88</td>
</tr>
<tr>
<td>No</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>timing of diet with breastfed/day to the child</td>
<td>1-4 Times</td>
<td>95</td>
</tr>
<tr>
<td>&lt;1 Times</td>
<td>11</td>
<td>10.4</td>
</tr>
<tr>
<td>Tea or kava</td>
<td>Yes</td>
<td>55</td>
</tr>
<tr>
<td>No</td>
<td>51</td>
<td>48.1</td>
</tr>
<tr>
<td>Fruit juice</td>
<td>Yes</td>
<td>46</td>
</tr>
<tr>
<td>No</td>
<td>60</td>
<td>56.6</td>
</tr>
<tr>
<td>Bread, roti, paratha, rice, rice or other foods made from grains</td>
<td>Yes</td>
<td>101</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>4.7</td>
</tr>
<tr>
<td>Any other fruits such as banana, apples, orange...,</td>
<td>Yes</td>
<td>89</td>
</tr>
<tr>
<td>No</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>No</td>
<td>88</td>
<td>83</td>
</tr>
<tr>
<td>Eggs</td>
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<td>89</td>
</tr>
<tr>
<td>No</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Fresh or dried fish or shellfish</td>
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<td>35</td>
</tr>
<tr>
<td>No</td>
<td>71</td>
<td>67</td>
</tr>
<tr>
<td>Any foods made from beans, peas, dal</td>
<td>Yes</td>
<td>77</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
<td>27.4</td>
</tr>
<tr>
<td>Any fortified, commercially available infant and young child food” [e.g. Cereals]</td>
<td>Yes</td>
<td>55</td>
</tr>
<tr>
<td>No</td>
<td>51</td>
<td>48.1</td>
</tr>
</tbody>
</table>

Figure 1: child's age % and frequency

Figure 2: frequency and percentage of mother’s education

Discussion

Factors that affect nutritional status of children's weaning practices are important one, which vary with every community.

In this study of 106, working mothers were giving, (83%) weaning diet with breast milk to their infants and (17%) working mothers were not, out of these participated mothers were giving (30%) semi solid and (51.9%) were giving commercial cereal. (51.9%) were giving tea to their children also. (59.4%) mothers were giving any other liquids such as carbonated drinks, sugary water and thin soup or broth to their children. 95.3% mothers were giving bread/roti, paratha, rice, or other foods made from grains to the children. (54.7%) mothers were giving white potatoes, white yam, or any other food made from roots. (38.7%) mothers were giving any meat, such as beef, lamb and goat as a weaning diet to their children. Early weaning was 21.7% and timely weaning was 59.4% where growing age was proposed for introduction of weaning. Early weaning was observed in this study only 21.7% and 18.9% children were started delay weaning >24months, which facts were quite opposite with finding of the research done in Lahore, in the same period of research another study was conducted at
Karachi (15) in which about, forty four 44% of the children were taken in the study, at the same era another study done in Bangladesh also on delay weaning. The findings have similarity with the results, which studies done in countries which are called developed one, where the introduction of weaning diet were seen at the three to four month of children age, about in forty five percent of the cases, and remaining (cases)were seen which start the weaning diet at six and seven month of the age. It might be their higher income level which one has the similarity with this study because, economic position of the participants of this study were reasonable ,but another reason of timely starting the weaning food may be the health education, higher education level the participants and affect of availability of tertiary care facilities in Islamabad and other required facility i.e. transportation etc. There is strong association were seen among the mother's weaning practices, income of family (p-value <0.001) and education of the mothers (p-value<0.001). literate and higher qualified (mothers) initiated practices of weaning on properly and timely and other respondents (mothers) who had low level of qualification, some time started the weaning in almost at inappropriate age. 89.6% of respondent(mothers) feed their children( > 3-4 )times in 24hours,remaining(10.4% ) respondent( mothers) were frequently <1 times feed their children which would result in insufficient required quantity of food with reduced, (16) required calories in 24hours which lead to under nutrition and, growth faltering. Other cause of introducing of appropriate weaning in this study was the education level of respondents (mothers) also (17). Who had higher education has been started the timely weaning >6 months, and who had lower level of education has start early weaning<6 months e.g. 3-4months. The 4.7% of respondents (mothers) started weaning after twelve months ( >12month) due to, gap of knowledge, more numbers of persons living in house and those children's having bottle feed. Among the above 4.7% mothers who initiated weaning process lately or after the appropriate time in which 50.9% introduce formula milk instead of semisolid as weaning diet because they thought that formula milk contains those ingredients which fulfill the required diet needs but they did not aware about the hazards which one happens with the feeding of the bottle feed i.e. bacterial contaminations, insufficient diet and others. 84% of mothers in this study gave to their infants (khichari), porridge and mashed banana as a weaning diet. 84% respondents were also giving the similar food as weaning diet by adding eggs. 38.7% mothers were giving to their kids' meat and fish also, and 33% vegetables, to their child. similar type of diet was also introduced for initiated as weaning diet in the research results of the study which one performed in the Karachi, the results of this study has the similarity with, which one conducted in England in the view where almost all seasonal fruits, fresh vegetables and roots containing diet were given . From the study of the results of developed countries it was highly highlighted that the mothers had given fresh fruit, vegetables and rich protein diet to their children as weaning diet because the mothers were highly educated and had sound economical back up. This study have similarity with the result of study which were conducted in the developed countries, it might be high level of education of respondents and reasonable economical background. In this study 50.9% commercial milk was used with cereals it might be the cause of easy availability, accessibility of commercial milk and cereals or effective media marketing strategies in Islamabad.51.9% of mothers were giving tea to their kids. The use of tea as a breakfast item in the results of a study which one conducted in the Lahore was indicated also. It (tea) has a lot of hazardous contents i.e. tannic acids etc that reduce absorption of iron with loss of appetite therefore its use would be discouraged through media awareness and sessions of health education in community. Intervention should be introduced in such situations also.

Banana and other fruits were given to the infants but the banana was the only fruit which one given frequently to the children may be the presence of the item during whole year in Islamabad which made it famous weaning diet due to its different quality. Few in quantity but also fresh juice, grapes and mangoes were also given as a weaning diet to their kids by the respondent mothers; this is somewhat compared with the studies which done in the economical sound communities e.g. (developed countries), because from the results of developed countries studies it was cleared that they introduced all types of vegetables, fresh juices and fruit during their infants weaning. (18) Potatoes as vegetables mostly used as the weaning diet of developing as well as in the developed countries, similarly the item frequently used in this study as weaning vegetable diet. In the study there is no significant gender discrimination was found because male and female child ratio is almost same, further it is cleared that there is no association b/w child gender (p-value0.325) and weaning practices.. Child age and mothers education have significant association with the weaning practices of the participant mothers i.e. (child age p-value 0.001 and mothers education p-value 0.001. income of the mothers (p-value 0.001) has significant association with weaning practices of the mothers. similarly birth order of child has no significant practices (p-value 0.437) of the mothers. Profession of father has significant association with the practices (p-value 0.001) of weaning.. Father's education has significant association with the weaning practices (p-value 0.001) also.

The sources of information regarding weaning practices and knowledge varied from mothers to mothers due to their economical and educational levels Conclusion:
A larger population of Pakistan belongs to a low
socioeconomic status, with extended families. Due to overcrowding and overburdened households, children may sometimes consequences of neglect or they are not provided with enough attention and care that is required. This neglect which is not necessary be intentional but may be due to inaccessibility of proper resources triggers a vicious cycle in child's health. Improper weaning practices make them susceptible to acute and chronic illness, growth retardation and apathy. In this study it is concluded that participated mother's practices about the weaning were well who were higher educated and have reasonable income as compared those whose education level was low with economical base and have limited excess to the resources, therefore it is clear that education and economical conditions play major role in the practices of the weaning, because in this study higher educated mothers done weaning practices timely and in appropriate ways, education, income and availability of resources played the major role in the enhancement of the mothers knowledge and practices about the weaning.

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PERCEIVED SOCIAL AND HEALTH PROBLEMS IN NURSES DUE TO NIGHT DUTY AT TERTIARY CARE HOSPITAL KHAIRPUR MIRS

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Abstract

Background: Workload might influence the productivity of workers due to multiple factors resulting poor performance of any organization.

Methods: This is a hospital based descriptive, cross-sectional study carried out in selected public (Tertiary care hospital) in Khairpur Mir’s conducted on male/female nursing staff working in hospitals. Sample of one hundred and thirty nursing officers were selected from the hospital. The data was collected using a self administered questionnaire; total 190 respondent but only 130 questionnaires were filled properly and was analyzed by using statistical program for social science (SPSS) version 20:

Results: The analysis revealed that the variable such as social effects and disturb the night shift duties among nurses especially at tertiary hospital Khairpur Mirs. Most of respondent 55.4% were highly effects of long duty hours on social life and relationship with their families disturbed due to night shift duty at tertiary hospital Khairpur Mirs. On the other side, the independent variables were socio demographic, workload, job satisfaction, sleep, and social activity. The respondent 32% reported backache, and 37% respondent palpitation, 38% respondent were premature delivery and low birth weight and 54% respondent disrupt menstrual cycle. The focus of this study was to analyze the sleep loss and disruption, psychosocial stress, health problems (fatigue, headache, low concentration and changes in the digestive system) in nurses who work in night shift. The results shows that insufficient sleep 57.7% respondents were affected due tonight duty regarding job satisfaction 42.3% respondents had a low level of job satisfaction. The male respondents were 24 and 106 were female nurses.

Conclusion: The study clearly depicts the issues of night working that is faced by the nurses.

KEYWORDS: Nightshift, Nurses, Workload, Job Satisfaction, Social and physical Effects.

Introduction

Health service is one of the industries that provide a continuous service around the clock, for the benefit of all citizens in any country. There is considerable evidence which night workers Nightshift nurses usually face issues of physical health and other social cause disturbances (1). Effects of night duty have been researched internationally, resulting in a number of studies on issues of home, family or social implications. However, it is too much stressful job and handling individuals during the night is not easy. While working in night shift, these nurses usually face issues related to physical, social, and psychological effects on them (2). Similarly, working in night shift is tough, so that nurses got ill, sleep deprivation, and other fatigue takes places (3). Family disturbances, mentally sick, and health issues. However, for female nurses, working during night shift cause many factors including social and family (4). Nurses are not much more interactive with their family and friends because of shifts cause negative impact. While working during night-shift put negative impact among the relationships of nurses with their friends, families and other relations. Nurses are working during nightshift, cause health issues, including imbalance of digestive system, cardiovascular problem, unevenness of metabolism, and sleeping issues. It needs to identify that nursing is a major component of a Pakistan health care system. To what extent dual-career female, working as a mother and as a health care provider woman faced work family clash issues. It is also important to analyze that the nursing is a stressful occupation, but they have negative consequences presented which directly affecting nurses’ job performance, social relation, physically and the quality of patient care as well. Similarly, most females like this profession however, are not blending this department due to work life problems and night shift rotations. The focus of this study is to analyze the sleep loss and social
disruption, psychosocial stress, physiological problem fatigue, headache, low concentration and changes in the digestive system on nurses that work in night shift. Literature review: It is an atmosphere in that nurses might be continuously exposed to a wide assortment of risks related to health that incorporates work accidents, illness, and injuries. Less social support and less leisure time with night versus day shift. Effects of night duty have been researched studies on issues of home, family or social implications (1). It has been affected by various structures of the nervous system under endogenous control and environmental influences like hours of work, social aspects, leisure, and recreational activities (5). In a study by Rogers et al. on nurses in the United States (n=393) it could be demonstrated that working > 12 h/day, overtime, and > 40 h/week increased the risk of errors in nurses (6). There is considerable evidence which night workers generally suffer chronically and intensely impaired health (7). Research on the nurses during night shifts recommends that fatigue can create an adverse impact on the nurses as their health, quality of job performance, protection and therefore the care of patients, as well as the impact of fatigue might be aggravate for nurses for the period of 50 years. The night shift of the nurses can relate to an imbalance between desire lifestyle and work. Lack of sleep of nurses makes the frustrated, temperamental, and annoyed. American Nurses Association’s survey found that in a sample of around 3000 nurses in that more than twenty had reported a bike accident because of fatigue in night shift. Irregular eating patterns might also relate to the nurses night shift work (8). Religious and holiday activities are other missing significant collection and social function because of night job was raised the impact and separation from the old friends (9). Night working shifts are causing many problems, like social disturbance and home family (10). There exist a sufficient relationship between shift working and social relationship also the occurrences of the unwanted impacts (11). It has also been identified that psychological, educational, family management and emotional issues (12). Research was conducted in Institute of Applied Psychology, Pakistan from December 2012 to June 2013. One hundred and fifty nurses from three teaching hospitals of Lahore, assess the social support and work motivation of nurses working in day and night shifts. Particularly the night work shift may negatively influence the health and well-being of workers, because of the disturbances, loss of sleep, digestive problem and lethargy, in women it may influence hormones reproductive functions and disturb their role in the family (3). This fact cannot be avoided that working at night duty occurrences of issues linked is effective, highly in the personal life of nurses also quality service of patients.

Methods
This study is descriptive cross sectional. Study site is on the teaching hospital that affiliated with Khairpur Medical College at Khairpur. So, teaching hospital has three attached hospitals named as Lady Willington Hospital, Civil Hospital and City Hospital. These hospitals are situated in Khairpur city. All night shift nurses enrolled for night duty in three month from September 2015 to November 2015. The SPSS version 20.0 was utilized for this research study. And descriptive statistics (Mean) used to analyze the data. Universal sampling method was used for collected data. The limit of sample size is one hundred and thirty nurses working in different department of Hospitals. Here, in this study the target audience is all registered night duty nurses of the tertiary hospital Khairpur Mir’s. Inclusion criteria: Nurses working at Tertiary Care Hospital Khairpur Mir’s having duties in Night Shifts at least three months in a year. Exclusion criteria: Nursing superintendent, A/N and other those who performed the night duty occasionally.

Instrument Statistical Development. Coding questionnaires Responses is the task that has to be performed. Validity to check the questionnaire validity, conducted on same group of night shift nurses at civil hospital sukkur. Thirty (n=30) night shift nurses was involved to see that questions were relevant and up to mark and allow them for further proceeding. Then, researcher is to be adjusted the original questionnaire based on the feedback from pre-test. Reliability Statistics further apply test for determining the actual position of the study. It is observed that the reliability analysis is use for evaluating the inner consistency based on scale having the value of Cronbach alpha such as .736 and number of items such as 48. Therefore, the results shows that the value of Cronbach’s alpha is considered as good for further apply tests.

Results
Data analysis, results and interpretation is extracted for analyzing the perception of nursing especially focusing on their night shifts. These tests are demographic information of the respondents especially focus on nursing who are performing their duties, responsibility and tasks in night shifts. The main components of demographic information are sex, age, marital status, designation and many other related activates helpful for conduction of the study. Second statistical test is known as chi square analysis models, which is normally, use for determining the relationship between the independent variables with dependent variable. The process of chi analysis is used for estimation the relationship among variables. Frequencies analysis that are extracted for determining the perceived the social problem due to night shift duties among nurses at tertiary hospital Khairpur Mir’s is presented as followed.

Table 1: Socio-demographic information

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Valid Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>24</td>
<td>18.5</td>
<td>18.5</td>
<td>18.5</td>
</tr>
<tr>
<td>Female</td>
<td>106</td>
<td>81.5</td>
<td>81.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
The result shows the frequency of 16 to 22 years i.e. 14, out of 130 respondents, 23-28 years are 46, out of 130 respondents, 29-35 years i.e. 36, out of 130 respondents and 36-44 years i.e. 19, out of 130 respondents and 45 or above having the frequency i.e. 15, out of 130 respondent’s participation for conduction of the study.

Marital Status: The result of marital status is composed of three aspects. First, one is single, second one is married, and third one is divorced staff working in different hospital. The result shows the frequency of single i.e. 63, out of 130 respondents, married are 62, out of 130 respondents and divorced frequency i.e. 5, out of 130 respondents participation for conduction of the study.

The analysis reveals that the variable such as sleep that effect and disturbs the night shift duties in nurses at tertiary hospital Khairpur. The results shows that insufficient sleep 57.7% were respondent affected. The results of the study reveal that around 40% (39.2%) of the respondents reported lack of sleep, restlessness and reported to feel irritable after the night shift duty. 36.% of respondents think that long working hours are the key reasons for sleeplessness. 40% respondents report that they find it difficult to sleep after night shift duty. Only 30% of the nurses plan their sleep after the night duty shift and around 37% nurses felt sleepiness during their working hours. Only 15% nurse had a short sleep before their night shift duty. Around 19% use sleeping aids like ear muffs and eye shield for sleeping. 32% of nurses always need means to induce sleep and

25% had to skip the meals due to loss of sleep

Table 2: Percentages of health issues during night duty shift reported by study participants

<table>
<thead>
<tr>
<th>S. No</th>
<th>Question and Statement</th>
<th>YES (%)</th>
<th>NO (%)</th>
<th>DON'T KNOW (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stomach ulcer</td>
<td>22.3</td>
<td>59.2</td>
<td>18.5</td>
</tr>
<tr>
<td>2</td>
<td>Frustrated headaches</td>
<td>71.5</td>
<td>16.7</td>
<td>12.8</td>
</tr>
<tr>
<td>3</td>
<td>Backache</td>
<td>32.3</td>
<td>59.2</td>
<td>8.5</td>
</tr>
<tr>
<td>4</td>
<td>Feel aches</td>
<td>18.5</td>
<td>69.2</td>
<td>12.3</td>
</tr>
<tr>
<td>5</td>
<td>Muscular strain</td>
<td>14.6</td>
<td>66.9</td>
<td>18.7</td>
</tr>
<tr>
<td>6</td>
<td>Hypertension</td>
<td>10</td>
<td>82.3</td>
<td>7.7</td>
</tr>
<tr>
<td>7</td>
<td>Palpitation</td>
<td>36.9</td>
<td>49.2</td>
<td>13.8</td>
</tr>
<tr>
<td>8</td>
<td>Insomnia</td>
<td>23.8</td>
<td>75.4</td>
<td>0.8</td>
</tr>
<tr>
<td>9</td>
<td>Needle stick injury</td>
<td>12.3</td>
<td>84.6</td>
<td>3.1</td>
</tr>
<tr>
<td>10</td>
<td>Premature delivery</td>
<td>37.7</td>
<td>47.7</td>
<td>14.6</td>
</tr>
<tr>
<td>11</td>
<td>Disrupts menstrual cycle</td>
<td>53.9</td>
<td>46.1</td>
<td></td>
</tr>
</tbody>
</table>

The respondent 32% Reported backache, yes and 37% respondent palpitation 38% respondent response in yes premature delivery and low birth weight and 54% respond disrupt menstrual cycle. The analysis reveal that the variable such as health that effects and disturb the night shift duties among nurse especially at tertiary hospital KhairpurMirs.

Effects of long duty hours on social life of nurses

Table No:0-4 Effects of long duty hours on social life of nurses

The 45% respondent reported that night shift duties always disturb the social life and 47% respondent said that it affect marital relationship by fatigue, and 45% reported social isolation and other 49% respondent reported miss social activity and wedding ceremony always due to night duty. The analysis reveal that the variable such as social effect and disturb the night shift duties among nurse especially at tertiary hospital KhairpurMirs. Most of respondent 55.4% were highly effects of long duty hours on social life and relation ship with their families disturbed due to night shift duty at tertiary hospital Khairpur.
Discussion
The findings were collected from 130 nurses working in four different hospitals of KhairpurMirs. In this, nurses were used to appoint in night shift in between one to three month. As per the findings, it is identified that their sleep is not completed by sleeping during daytime. While working in night shift they face many social issues respectively. Hence, it proved from literature review and findings of the study 42% of the working in shifts is factor of stress that could have a negative effect on the individual's health. This study findings are comparable with the result of the studies conducted internationally where in work place and cultural difference may affect global applicability (1). The study have been conducted in Pakistan finding lack of sleep, like irritation, headache, gastric issues. Like child care family relation. Findings are comparable in which 145 nurses from different parts of the cities selected (14). The literature shows that while doing night shift duties, physiological problem use to take place. These different problems include such as insomnia, stress, hypertension, migraine, and other disorders may occur. According to (15), they discussed that working at the night shift, many nurses are not satisfied, and as per their thinking, they are overloaded in the night shift work. Similarly, at KhairpurMirs, the situation is same of the nurses. They also face issues of physiologic in the KhairpurMirs. Unfortunately, the night shift issues in nurses are presented in the city. These nurses also need an environment where they can survive properly. Nurses are the nucleus of the health care system. Without the nucleus, the cells will not survive (16). The literature shows that in night shift nurse's performance decrease with passage of time and they even not satisfy the patients. When the nurses not sleep in nighttime, and then will sleep in daytime, which is statistically wrong for a human body. As per the American Nurses Association, the night shift fatigue is harder to handle as company to day (2). Workload of nurses 46% agreed negatively impacts on the other aspects as if they became ill, sick, stressed, depressed. These study findings are comparable with the result of the studies conducted in 2013 on 20 novice nurses working in two universities hospitals of Jahrom, Iran (15). The participants of the present study also pointed that marital relation affected 47% due to night working Personnel's relationship with the family 44.6% effect as well as society and also have destructive social relationships 45%. Findings are comparable with the result conducted of the studies in 2012 on. Shift work—problems and its impact on female nurses in Udaipur, Rajasthan India (4). The findings show that while working in nightshift the nurses get affect from factors such as socio demographic workforce, and social effect. Thus, when these nurses work in night hours then their job satisfaction level also decreasing Most of respondent 55.4% were highly effects of long duty hours on social life and relation ship with their families disturbed due to night shift duty at tertiary hospital Khairpur

Conclusion
The study clearly depicts the issues of night working that is faced by the nurses such as fatigue, diseases and social and family relationships affect and many other aspects. Fatigue and extra workload is the primary factor that disturbs the nurses on the night shift is highlighted under the study.

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USE OF CAFFEINE INTAKE AMONG MEDICAL STUDENTS DURING EXAMINATIONS IN A PUBLIC SECTOR MEDICAL COLLEGE OF PAKISTAN

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Abstract

Background: Caffeine is one of the most commonly used substances due to its many effects including increased alertness and vigilance. It does have side-effects, however, such as palpitations and withdrawal symptoms. Medical education often requires students to study for extended hours, especially during periods of increased workload prior to tests and examinations. This cross-sectional study investigated caffeine use during exams by first- to fourth-year medical students at the Federal Medical & Dental College, Islamabad and the level of knowledge of its benefits, side-effects and withdrawal symptoms.

Methodology: Data was collected through a standardized questionnaire especially designed for this project and analyzed using SPSS 20. Ethical approval was granted by the Ethical Committee of the Shaheed Zulfiqar Ali Bhutto Medical University.

Results: A 92.8% (156/168) response rate was obtained. All the participants used caffeine, to stay awake during exams. Black tea (86%) was the most commonly consumed caffeinated product followed by coffee, coke and energy drinks. There was no significant difference in caffeine consumption among four academic classes, day scholars and hostel residents. Misconceptions about caffeine were also identified. Participants had most knowledge about withdrawal symptoms, less about side effects and least about benefits of caffeine.

Conclusions: The high percentage of caffeine usage and low scores in the caffeine knowledge test indicated that most participants were using caffeine without having sufficient knowledge of its benefits, side-effects and withdrawal symptoms increasing the need for implementing the awareness programs by the student health and counseling facilities on campus.

Keywords: Caffeine, examination, medical, low and middle income country.

Introduction

Caffeinated-beverages are among the most frequently imbibed beverages by teenagers and adults due to their mentally stimulating effects. Caffeine is the world’s most popular drug, with over 85% of Americans using it on a daily basis (1,2). It has the chemical formula CHNO and can be chemically named 1,3,7 trimethylxanthine, 1H-Purine-2,6-dione, 3,7 dihydro-1,3,7-trimethyl, methyltheobromine, 1,3,7-Trimethyl-2,6-dioxopurine, and 7-Methyltheophylline (1,3). Caffeine is part of the pure alkaloid group, which are sometimes called methylated xanthines; its isomers are theophylline, theobromine, and paraxanthine. Caffeine is metabolized quickly because of its water solubility, and is absorbed in the stomach and intestines. Alterations in pH or food present in the gastrointestinal tract affect the rate of absorption. Once in the liver, 98% of the ingested amount is then metabolized and less than two percent of the end product are then excreted in the urine. The untouched remaining 2% is then distributed via the blood as a demethylated compound, like paraxanthine, theophylline, or theobromine. Caffeine also passes through the blood-brain barrier (3) leading to increase in metabolic rate, serotonin secretion, heart rate, norepinephrine/epinephrine secretion, gastric secretion, smooth muscle relaxation, glomerular filtration, skin temperature, muscle contractility, and urinary output all increase (4)

Caffeine functions in the brain as nonselective A1 antagonist, blocking the receptors responsible for injury reaction and collagen production. It can also block the A2 receptor with the addition of an alkyl group. The A1 and A2 receptors work together to help regulate wakefulness and sleep; A2 receptors are abundant in striatal neurons and help to balance out the majority effect of A1 receptors (5). As it is a drug, caffeine can
have both dependence and withdrawal. Chronic use of caffeine even at 100 mg per day can produce tolerance and withdrawal symptoms over time (6). In extreme cases, this dependence and withdrawal can evolve into caffeine intoxication or "caffeineism"; there are entries in the Diagnostic and statistical Manual of Mental Disorders (DSM-IV-TR) that refer to this regular excessive consumption of caffeine and the related disorders (7). Caffeine is found naturally in over 60 species. It has evolved as a protective mechanism to kill bacteria, fungi, weeds, and insects in plants (1). At room temperature, the compound caffeine is odorless, white, bitter, and in a powder or crystal structure. However, it is not available on the market in this form (7). As a drug, caffeine is present in a wide variety of substances, from coffee, tea and sodas to weight loss drugs and medications. It can also be taken as a pill to vanquish sleep.

Instant hot cocoa mixes provide 10-17 mg of caffeine per cup and chocolate milks provide 5-10 mg of caffeine per serving. Caffeine content in these products varies on if a consumer is making something at home versus using something pre-made and store-bought. Tea, or Camellia sinesis is the second highest consumed beverage in the world, second to water. Fourteen percent of American caffeine is found in tea. Black tea has the highest concentration of caffeine.(4). Coffee is the top source of caffeine in adults, with 70% of caffeine in the United States found in coffee beans (7). Globally, it is the most popular beverage, consumed by 90% of adults. It should be noted that decaffeinated coffee also has a caffeine content of 5-25 mg per serving, depending on preparation (8). Energy drinks are the newest source of caffeine in the market, debuting with Red Bull in 1997 (9). Caffeine is the only alertness aid for sale by the Food and Drug Administration (FDA). The top selling caffeine pills on the market today are Vivarin and No-Doz . Vivarin is specifically marketed towards college students, as well as truck drivers and bodybuilders. One Vivarin pill has 200 mg caffeine. Caffeine has also been a treatment for obesity, since it increases lipolysis and metabolic rate. From the caffeine consumption of 300 mg per day, an individual could see an increase in energy expenditure for up to 24 hours

Harmful effects of caffeine include its diuretic effect increasing urinary output for up to 24 hours following consumption. For healthy individuals, this dehydration is not as life-threatening, but for others on prescribed diuretics or other conflicting drugs, this presents an unsafe situation. Other harmful effects include weight gain and alteration in natural circadian rhythms leading to problems in cognitive performance, motivation, and work daytime sleepiness and never adjusting to the new sleep-wake cycle wears on the body over time (10, 11). In addition, hypercholesteremaa and tolerance may develop (3).

Students consume caffeine with meals (34%) and on a daily basis (33%); students tend to keep a consistent caffeine use to perhaps both combat sleepiness and keep on a stable track of performance. Age is a large factor determining caffeine use (12,13). This study was conducted to determine the use of caffeine by medical students to cope with academic stress during exams and their awareness regarding benefits, side effects and withdrawal symptoms.

Methodology:
This was cross sectional study conducted among medical students enrolled in first to fourth year at FMDC above the age of 17 years. A sample size of 168 was calculated by using the proportion formula. Students were interviewed through pre-tested, validated questionnaire (7). Questionnaire was divided into three sections, first section dealt with consent and general information regarding participant, second with amount of caffeine consumed by participant during exams and third with knowledge of benefits, side effects and withdrawal symptoms of caffeine in participants. Data was analyzed by SPSS computer application version 20 and it is presented in tabular form and graphical representation.

Results
A total participation rate of 92.8% (156 out of a possible total of 168) was obtained. Twenty-eight (90.32%) students participate from first year, thirty-one (100%) from second year, forty-one (89.1%) from third year and fifty-six (93.3%) from fourth year. 51(32.69%) participants were male and 105 (67.30%) participants were female. Above one thirds were day scholars / living with families and two thirds were hostel residents. All the participants showed that they consumed caffeine-containing products. The purpose to described to be stay awake (34.6%), habitual use (27.6%) and to increase alertness (23.7%). Thirteen percent of the caffeine consumers indicated that they used it to relieve headache. The academic year groups differed slightly with regard to the reasons selected for the consumption of caffeine and the hostel and day scholar residents differed slightly with regard to the reasons selected for the consumption of caffeine. Black tea was the most commonly consumed product (86%), followed by coke (66%), coffee (62%) and green tea(54%). Other sources like energy drinks, cocoa drinks and cocoa chocolate were also used (Table 1).

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>34%</td>
</tr>
<tr>
<td>Female</td>
<td>66%</td>
</tr>
<tr>
<td>Living status</td>
<td></td>
</tr>
<tr>
<td>Hostels</td>
<td>58%</td>
</tr>
<tr>
<td>With Family</td>
<td>42%</td>
</tr>
<tr>
<td>Purpose to use Coffee</td>
<td></td>
</tr>
<tr>
<td>To stay awake</td>
<td>34%</td>
</tr>
<tr>
<td>To relieve Headache</td>
<td>14%</td>
</tr>
<tr>
<td>Habitual</td>
<td>52%</td>
</tr>
<tr>
<td>Habitual use</td>
<td>24%</td>
</tr>
<tr>
<td>What kind of drink</td>
<td></td>
</tr>
<tr>
<td>Black tea</td>
<td>86%</td>
</tr>
<tr>
<td>Coke</td>
<td>4%</td>
</tr>
<tr>
<td>Coffee</td>
<td>2%</td>
</tr>
<tr>
<td>Green tea</td>
<td>4%</td>
</tr>
</tbody>
</table>

Table 1: Characteristics of the participants.
The participants' scores on the section of the questionnaire testing their knowledge were calculated and categorized (0 = without knowledge; 1 = little knowledge; 2= moderate knowledge; and 3= good knowledge). It was based on students' own perception about his or awareness of fact or concept. Only 11.75% of the participants had a good knowledge, while 16.88 % had little knowledge and 48.07% had no knowledge at all. Regarding awareness of side effects of caffeine, 31% had good knowledge, 15% had little, 23.9% had moderate and 30.4 % had no knowledge at all. Only 28.2% per cent of participants had good knowledge of withdrawal symptoms while 29.6% had no knowledge at all. Only 14.9% of participants had strong misconceptions. 49.11 % were aware of the concepts being myth and showed no knowledge supporting such facts.

Discussion

Participation was 92.8% % for the entire target population of first- to fourth year medical students. Based on the high response rate from each academic year group, it can be stated that the results obtained in this investigation are representative of the target population. The results indicated that 100% of the 156 participants used caffeine. This is consistent with the belief that caffeine is one of the most widely consumed substances in history. There was no significant difference among caffeine consumption among different academic year students and among day scholar or boarding students. The main purpose was found to stay awake during exams.

27.6 % participants selected habitual use as a purpose of caffeine use. Use of Black tea was found to be most common source followed by coke and coffee. Use of Black tea and coke was exceeding more than 3 servings per day by most of participants during exams compared to other caffeine containing products. Results also showed that almost 70% of participants had knowledge on the withdrawal symptoms of caffeine, less knowledge on the side-effects and the least knowledge on its benefits. Participants were more aware of the side effects of caffeine, particularly with regard to its effects on the heart. Many students wrongly believed that aggression and hallucination were result of excessive caffeine withdrawal symptoms. The results of this study corresponded to other studies done in a private sector medical university of Karachi (15) and Dow Medical College in 2010 showing almost same results(16). These results were also supported by an international study conducted by students of University of Free state showed 94% students used caffeine and 62.2% used for academic purposes. (17).

Conclusion

The results obtained in this study clearly showed that caffeine usage for academic purposes, especially caffeine in the form of black tea, coffee and energy drinks increase drastically during exams. The majority of participants were using caffeine without sufficient knowledge of its benefits, side-effects and withdrawal symptoms. Recommendations should be made to the student health and counselling service on campus to implement measures, such as displaying posters in strategic locations or distribution of information leaflets, in an attempt to improve students' knowledge about use of caffeine.

References.

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18. K-H Lee Medical student, GP Human Medical student, JJ Fourie Medical student, WAN Louw Medical student, CO Larson MBChB, MFamMed & G Joubert BA, MSc (2009) Medical students' use of caffeine for 'academic purposes' and their knowledge of its benefits, side-effects and withdrawal symptoms, South African Family Practice, 51:4,322-327,
DIMENSIONS OF PARENTAL BONDING AND SOCIAL COMPETENCE IN FUNCTIONAL & DYSFUNCTIONAL FAMILIES

Tamkeen Saleem¹, Seema Gul²

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Abstract

Background: Parent-child relationship is imperative for physical, mental and social development of the children. The prime objective of the study was to investigate the relationship between the dimensions of parental bonding and social competence among the adolescents of functional and dysfunctional families. Differences in adolescents from functional and dysfunctional families on dimensions of Parental bonding and social competence were also investigated.

Methods: A sample of 400 adolescents from functional and dysfunctional families was included in the present study. The data was collected from government and private schools, colleges, clinics and hospitals. The present study was conducted at the twin cities of Islamabad and Rawalpindi. The instruments used were demographic sheet, Multi-Dimensional Family Functioning Scale, Parental Bonding instrument and Youth Social Competence Scale. Data was analyzed through SPSS 21 version, Pearson product moment correlation, t-test analysis were applied for measuring correlation and group differences.

Results: The p-value indicates that maternal and paternal care is positively and maternal and paternal control is negatively related to social competence in adolescents. The results also indicate that maternal control and paternal control was high in dysfunctional family adolescents whereas maternal care, paternal care and social competence were high in adolescents from functional family group.

Conclusion: Parental Bonding and healthy family functioning is vital for the social competency of the adolescents.  

Key Words: Parental bonding, social competence, functional and dysfunctional family

Introduction

Development in Adolescence is dynamic and subjected to numerous societal and ecological components like family environment, parenting styles, parental attachment style, familial attributes, social and moral standards (1). During this time period parenting becomes more challenging. Parental behavior is characterized by tenderness and protection in such a way that it does not hamper autonomy, it is critical for the development of abilities to deal with unpleasant conditions in life, to decreases the possibilities of developing psychopathology, over and above permitting the healthy bonding with parents (2).

There have been various explanations for the notion of Parental bonding by the attachment theorists. Bowlby developed his theory on attachment styles and discussed that the child who gets receptive and sensitive parenting from parents, forms a strong bond with parents and thus learns reciprocal interactions and care-giving in social relationships (3-5). Baumrind identified attributes of parenting styles and labeled them as responsiveness and control (6). Rohner tagged these attributes as acceptance-rejection by parents (7). Parker proposed care and control to be main dimensions for parenting style and attachment. One way of finding the contribution of parents to bonding is to assess parental behaviors and attitudes (8). For the present study the theoretical framework was based on two-factor theory of Parker; care and control.

Family dynamics and degree of family functioning has an influence on the behavior, attitude, skills and competencies (9). Children belonging to dysfunctional families face worse outcomes and consequences, either during childhood, adolescence or at later stage in life. A family is known as a dysfunctional family which frequently experiences conflict, misbehavior, neglect and/or physical and psychological abuse, making the members in charge of accommodating such occurrences and actions (10-12). The significance of parent-child relationship for mental
health, adjustment, personality, emotional and social development has been conventionally acknowledged by many theoreticians in Psychology (13-16). During adolescents friendship associations, social interaction and social skill development and management are vital as they are sources of emotional security, support for growth in social competency and prototypes for late relationship development (17).

There have been few researches conducted in Pakistan related to functional and dysfunctional families. Considering the importance of parental bonding and social competence for the better child outcomes, these variables were studied in present study in functional and dysfunctional families. The present study will highlight the importance of family dynamics specifically the functioning level for the development of bonding and social competence. It is crucial to study this area as this not only impacts the family only but also the whole social fabric of the country. The objective of the present study was to investigate the relationship between the dimensions of parental bonding and social competence among the adolescents of functional and dysfunctional families.

**Method**
The study was conducted after getting ethical approval from the Ethical Review Board of International Islamic University. A written informed consent was obtained from all the participants and their significant others (parents & gardians). A comparative study design was used to measure dimensions of parental bonding and social competence among adolescents belonging to functional and dysfunctional families. The objectives of the present study was to investigate the relationship between the dimensions of parental bonding and social competence among the adolescents of functional and dysfunctional families.

The study was conducted at the twin cities of Islamabad and Rawalpindi. The participants were informed regarding the purpose of the study. The participants were provided with the study questionnaires and were asked to fill the questionnaires. The first section of study questionnaire was self-structured to record the demographic variables, like age, gender and educational level. The second section comprised of standardized and valid instruments Parental Bonding Instrument to assess Parental Bonding separately towards mother and father. The third section comprised of standardized and valid instruments Youth Social Competence Scale that measured Social Competence in adolescents. The fourth section consisted of standardized and valid instruments Multi-Dimensional Family Functioning Scale to measure functioning of Family. The confidentiality of the responses of participants was maintained. For data entry and analyses Statistical Package of Social Sciences (SPSS) 21v. was employed. Descriptive statistics, correlation analysis, and t-test were applied.

**Results**
Pearson product moment correlation was computed to analyze the relationship between dimensions of parental bonding and social competence among the adolescents. The results (Table I) revealed that maternal and paternal care are positively related to social competence in adolescents. Whereas results indicated that maternal and paternal control have an inverse relationship with social competence. This indicates that parental care is important for the social competence in adolescents. The results are highly significant (p<.001).

**Table 1: Pearson Product Moment Correlation between dimensions of Parental Bonding and Social Competence (N=400)**

<table>
<thead>
<tr>
<th></th>
<th>Maternal Care</th>
<th>Maternal Control</th>
<th>Paternal Care</th>
<th>Paternal Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Competence</td>
<td>.573***</td>
<td>.337***</td>
<td>.322***</td>
<td>.379***</td>
</tr>
<tr>
<td>P-value</td>
<td>.000</td>
<td>.003</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

*** Correlation highly significant at p value < .001
** Correlation highly significant at p value < .01

Table 2 indicates the differences on dimensions of Parental bonding between the adolescents belonging to functional and dysfunctional families. The results indicate that Maternal control and paternal control was high in dysfunctional family adolescents whereas maternal care, and paternal care was high in adolescents from functional family group. The findings were significant at the level of .01.
Table 2: Mean, Standard Deviation and t-values for dimensions of Parental Bonding in functional & Dysfunctional Families.

<table>
<thead>
<tr>
<th>Family Functioning</th>
<th>N (400)</th>
<th>M</th>
<th>SD</th>
<th>t(398)</th>
<th>p</th>
<th>95% Confidence Interval Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysfunctional</td>
<td>200</td>
<td>21.26</td>
<td>6.10</td>
<td>29.91</td>
<td>.000</td>
<td>16.42</td>
<td>18.72</td>
</tr>
<tr>
<td>Functional</td>
<td>200</td>
<td>38.83</td>
<td>5.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysfunctional</td>
<td>200</td>
<td>20.59</td>
<td>7.97</td>
<td>4.25</td>
<td>.000</td>
<td>1.62</td>
<td>4.42</td>
</tr>
<tr>
<td>Functional</td>
<td>200</td>
<td>17.57</td>
<td>6.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paternal Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysfunctional</td>
<td>200</td>
<td>19.33</td>
<td>7.21</td>
<td>10.31</td>
<td>.000</td>
<td>-7.67</td>
<td>-5.21</td>
</tr>
<tr>
<td>Functional</td>
<td>200</td>
<td>25.78</td>
<td>5.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paternal Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysfunctional</td>
<td>200</td>
<td>22.46</td>
<td>7.38</td>
<td>6.89</td>
<td>.000</td>
<td>3.48</td>
<td>6.25</td>
</tr>
<tr>
<td>Functional</td>
<td>200</td>
<td>17.59</td>
<td>6.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 indicates that adolescents from functional families have superior social competence as compared to adolescents from dysfunctional families. The findings are highly significant at the level of .001.

Table 3: Mean, Standard Deviation and t-values for dimensions of Parental Bonding in Functional & Dysfunctional Families.

<table>
<thead>
<tr>
<th>Family Functioning</th>
<th>N (400)</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p</th>
<th>95% Confidence Interval Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Competence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysfunctional</td>
<td>200</td>
<td>30.35</td>
<td>5.04</td>
<td>19.12</td>
<td>.000</td>
<td>-9.21</td>
<td>-7.49</td>
</tr>
<tr>
<td>Functional</td>
<td>200</td>
<td>38.71</td>
<td>5.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

Family dysfunction interferes with the healthy parent-child relationship, healthy family functioning and child outcomes in general. Every family experiences some conflicts or stressful conditions in life, these conditions may impair the functioning of the family. A healthy family is capable to return to normal and healthy functioning coping up with the crisis situation. However in the dysfunctional families are unable to cope up with the problems and the problems tend to get more and more chronic, effecting the child outcome in such a manner that the needs of the children are not met. Negative patterns of the behavior are predominant in dysfunctional families.

In Pakistan, family institution possesses anexclusive valueattributable to the responsibility and function of rearing and nurturanceto guarantee the wellbeing of children, and overall healthy Pakistani generation. For the development of healthy generation, a healthy family system is indispensable. In today’s worldview family life has transformed due to information technology, ever demanding life routine, deficient communication and financial issues. This has brought multiple challenges, complexities and conflicts among the family members. Thus, impairs the family functioning by devastating the social, emotional and psychological domains of family system (18).

The present study investigated parental bonding in terms of care and control and its relationship with social competence. Separate measures of care and control were taken for mother and father. The fundamental premise is that these two factors of care and control have different relationship with social competence. The results indicate that parental care and parental control have positive and negative relationship respectively. Findings of the present study revealed that maternal and paternal care is positively related to social competence and maternal and paternal control is negatively related to social competence. Literature reveals that healthy parental practices are vital for the construction of healthy & socially skilled individuals. (19)

However, when conflicts, neglect or abuse take place in family, the coaching for development of social skills is not appropriately imparted. And in these circumstances the children do not become skilled at interacting with other children as well as adults (20,21).

The present study also investigated the differences on dimensions of parental bonding between adolescents from functional and dysfunctional families. It was hypothesized that there will be significant difference on the dimensions of parental bonding in adolescents from functional and dysfunctional families. The findings disclosed that adolescents from functional families reported to be high the factor of care for mother as well as for father. Whereas adolescents from dysfunction family, reported a higher parental control exerted by both parents. This may indicate that the adolescents perceiving and experiencing more family dysfunctioning tend to have more restrictive and over protective parenting. A study reported that when a child has a higher perception of parental marital conflict they tend to have low parental bonding and low social competence (22).

Controlling parents do not permit their children to take responsibilities suitable to their age. They continue to dominate and take decisions for their children, considering that they might become unsolicited to their children. This prohibits them to become autonomous. As a result of these negative parenting practices children feel angry, incompetent, inadequate and helpless. Children do not learn social skills, decisiveness and independency. Transitions into healthy adults is hampered and characterized by low decision making abilities and dependence on others (23).

The findings of the present study report that adolescents from functional families are more socially competent as compared to adolescents from dysfunction families. Researchers have recognized that children from the unhappy and depressed families have elevated intensity of stress and exhibit a reduced amount of involvement in social interaction and activities with mates (24).

Several practical implications can be extracted from the research. The findings of the present study emphasize the strong connectivity of the parental bonding and behaviors on the social skills of their...
children. This suggests that the quality of care provided by parents, and healthy family system is central development of excellence in social skills among the adolescents. This calls for the measures to be taken for educating the parents and masses regarding raising the children specifically in adolescence which a crucial time period of development. The findings publicize the need on part of parents to review their own behaviors and comprehend the influence of their behavior on their children. Some character education programs for parents with adolescents should be developed.

**Conclusion**

The study suggests that social competency cannot be fostered by control or overprotectiveness. Thus, rather than using excessive control parents should encourage warmth, care, closeness and autonomy which can permit the adolescents to be more functional and productive members of the country.

**References**

LADY HEALTH WORKERS’ PERCEPTIONS TOWARDS TUBERCULOSIS AND ITS DETERMINANTS AT LATIFABAD, SINDH, PAKISTAN

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Abstract

Background: Lady Health Workers (LHWs), performing in Tuberculosis control programs have direct access in the communities. This study was designed to improve the TB status in Sindh province by improving the knowledge and practices of LHWs.

Objective: To assess the TB related knowledge, attitude and practices among LHWs at tehsil Latifabad, district Hyderabad, Sindh.

Method: A mixed method Cross-sectional study was done on universally selected 384 LHWs from Latifabad. Three focus group discussions were conducted with eight participants for each group. A pre-tested structured questionnaire and field guidelines were used for data collection. Analysis was done on SPSS software by calculating frequencies, percentages, mean and median. While for inferential analysis chi square, t-test and Mann Whitney U tests were used. For FGDs, content analysis method was used.

Results: Sufficient knowledge was found in about half 193(50.3%) of the participants. The overall attitude and practices of most of the LHWs 214(55.7%) and 205 (53.4%) respectively was not good. A significant difference was found between LHWs knowledge score of those who had insufficient (28.08 ± 3.0) and sufficient knowledge (28.08 ± 3.1) with p-value <0.001. Also good attitude (47.74±2.8) and practices (51.45±3.8) of LHWs differed significantly from those who did not have good attitude (36.09±4.8), and practices (40.44±3.3) with p-value <0.001. The insufficient knowledge was associated with unsafe practices. Tuberculosis related stigma was found in the community, people do not want to disclose their disease.

Conclusion: Overall knowledge, attitude and practices about TB were not satisfactory among LHWs of Latifabad. An educational intervention is recommended for LHWs.

Key words: Community health workers, infectious disease, knowledge, attitude, practices, developing country

Introduction

According to “International Union against Tuberculosis Control and Lung Disease” (IUATLD), TB is an infectious disease, caused by bacteria called Mycobacterium tuberculosis. In 1993, the World Health Organization (WHO) declared TB as a global emergency(1). Global efforts have cured about 56 million tuberculosis patients & reduced its mortality rate substantially, but it still remains a majorglobal public health concern & accounting for more than 49 million disability-adjusted life-years (DALYs) lost every year (2). Although, TB is an old disease, health workers are still facing difficulty in controlling it all over the world.

In 2006,WHO launched “The Stop TB Strategy” as an evidence-based approach “to reduce the TB burden with provision of supervision and patient support based on effective two way communication between healthcare providers and those receiving treatment”(3). Of the overall total TB prevalence of Eastern Mediterranean Region of the WHO, 61 % of it accounted by Pakistan alone. It ranks fifth amongst tuberculosis high-burden countries worldwide(4). In 2014, TB killed 1.5 million people (1.1 million HIV-negative and 0.4 million HIV-positive). According to Global TB Report of 2015, the toll comprised of 890 000 men, 480 000 women and 140 000 children. In May 2014, the 67th World Health Assembly passed a resolution as the global End Tuberculosis strategy and have set new targets for post-2015, one of whichinclude reduction of incidence by 90% by 2035 (5).

In our country Pakistan, community health workers (CHWs) are known as Lady Health Workers (LHWs). According to Alma Atta declaration in 1978, “LHWs are the backbone of the primary health care”. Because these live very close to the community people, they can identify TB suspects and refer them to the first level care facilities earlier for diagnosis and treatment (6).
Gaps in TB awareness and poor healthcare seeking behaviours are identified as among the main challenges for effective TB prevention and control. In order to end tuberculosis, it is mandatory to interrupt its route of transmission and eradicate its source by fulfilling knowledge gaps and changing people behaviours for early recognition of TB symptoms, presentation to healthcare facilities and compliance with effective treatment without any delay (7).

We designed this study to explore the knowledge, attitude and perceptions about TB, of the LHWs, who are the first perceivers of TB signs and symptoms in the people and are the main key connectors of community with health care system.

Methodology

We conducted a mixed method cross-sectional study at tehsil Latifabad, which is an administrative sub-division of Hyderabad District in Sindh province of Pakistan. The study was conducted from September to November of year 2015. We took a universal sample of all the LHWs working at the health centers of the study site. After excluding those, who were on long term or maternity leaves, out of city, under or near retirement process at time of study, along with refusals, 384 LHWs were interviewed after taking their informed consent. Pre-structured and tested questionnaires were used for data collection with the questions regarding knowledge, while Likert scale questions were used for the attitude and practices assessment of LHWs about TB. For the Qualitative portion of the study, purposive sampling method was used to conduct focus group discussions from same study site LHWs, that was of about 8-10 LHWs in each group. An interview guide was designed, and used as instrument for FGDs. Three FGDs were done, tape recorded, and their dialogues were transcribed. Ethical rules were observed properly during whole study. All collected information was kept confidential.

Individual scores for TB knowledge were summed up to determine the mean value as the cut-off point. The respondents securing a score of mean or more were considered having sufficient knowledge while those securing less than the mean score were labeled as having insufficient knowledge. Items of five-point Likert scale for attitude were recorded as: "Strongly disagree: 1, Disagree: 2, Neutral: 3, Agree: 4 and Strongly Agree: 5". For analysis purpose, five point Likert scale was rounded to and converted into three items Disagree, Neutral, and Agree. For practice, responses were recorded as sometimes, never and always respectively. Chi-square and Fisher Exact tests were applied to check the significance of association. For comparison of LHWs’ mean score groups, the Independent sample t-test for knowledge, and for median, Mann-Whitney U test for attitude and practice were used. For all analysis, 95% confidence interval with a significance level of p-value <0.05 was used. For FGDs, the content analysis method was used. Themes and sub-themes were generated after coding of discussion notes, transcripts and audio records.

Results

Baseline characteristics of respondents

Mean age of the respondents was 41.8 ± 7.9, with a range of 23 to 59 years of age. Majority of LHWs (333, 86.7%) were married and had a secondary level of education 215 (56%). Seventy five percent of LHWs had more than ten years of job experience. (Table 1)

Table 1: Socio-demographic characteristics of the LHWs

<table>
<thead>
<tr>
<th>Variable</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents age in years</td>
<td></td>
</tr>
<tr>
<td>&lt;=</td>
<td>33(8.6)</td>
</tr>
<tr>
<td>31-40</td>
<td>143(37.2)</td>
</tr>
<tr>
<td>41-50</td>
<td>151(39.3)</td>
</tr>
<tr>
<td>51</td>
<td>57(14.8)</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>53(13.8)</td>
</tr>
<tr>
<td>Secondary</td>
<td>215(56)</td>
</tr>
<tr>
<td>Metric and above</td>
<td>116(30.2)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>51(13.3)</td>
</tr>
<tr>
<td>Married</td>
<td>333(86.7)</td>
</tr>
<tr>
<td>Job experience in years</td>
<td></td>
</tr>
<tr>
<td>&lt;= 5</td>
<td>8(2.1)</td>
</tr>
<tr>
<td>5-9</td>
<td>88(22.9)</td>
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<tr>
<td>10-14</td>
<td>144(37.5)</td>
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<td>&gt;= 15</td>
<td>144(37.5)</td>
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</table>
Quantitative results
LHWs Knowledge about TB
Out of total knowledge score in terms of TB, which was 47, a mean score of knowledge among LHWs was 32±4.7 (range 20-42). Sufficient knowledge was found in about half of the participated LHWs (193, 50.3%).

The LHWs were much aware of cough >3 weeks as one of TB symptoms with a p-value 0.24 (Chi square). On the other hand they had significant insufficient knowledge about other TB symptoms like fever, coughing up of blood, weight loss, and night sweats with p-value <0.001(Chi square). They had also had significantly deficient knowledge about body parts like intestines, bones, kidneys and any body part which could be affected by TB, with p-value <0.001(Chi square). The participants had sufficient and significant knowledge about lungs being affected by TB at p-value 0.06 (Chi square).

Results showed that LHWs had significant insufficient knowledge about causative agent of TB, predisposing factors, occurrence, mode of spread, and vulnerable population for TB with p-value <0.001(Chi square). Among total participants 159 (41.4%) thought that TB is caused by bacteria, While 270 (70.3%), 171 (44.5%), and 7 (1.8%) thought that it is due to germs, polluted environment and parasites. Similarly, according to them, poverty 108 (28.1%), malnutrition 112 (29.2%), overcrowding 222 (57.8%), and family history of TB 34 (8.9%) are not the predisposing factors for occurrence of TB. Participants also have misconceptions about TB spread. According to 48 (12.5%), 29 (7.6%) and 50 (13%) of the LHWs, TB can be spread through eating with patients, sexual relation and by the use of used syringes respectively.

Sufficient knowledge about diagnosis, treatment and prevention of TB was found in (32.8%), (65.6%) and (61.2%) of the LHWs respectively. Significant insufficient knowledge was found among LHWs regarding diagnosis methods like ultrasound, X-ray, urine/blood test and sputum examination with p-value <0.001 [p=x^2]. Also knowledge deficiency was found in the treatment and prevention of TB with p-value <0.001[p=x^2] except for treatment option/variable complete rest without drugs with p-value 0.14. [p=x^2]

Attitude of LHWs regarding TB
Median attitude score of LHWs regarding TB was computed as 43 (Inter-Quartile Range=12). The overall attitude of majority of the LHWs 214 (55.7%) was found to be not good. Attitude differences of LHWs regarding TB were found significant for all variables with p-value <0.001 except one that is "TB is not a serious threat at this time" which came with p-values 0.45 [p=x^2] (Table 2).

Table 2: With sufficient knowledge, LHWs attitude regarding TB

<table>
<thead>
<tr>
<th>Variables</th>
<th>Disagree n(%)</th>
<th>Neutral n(%)</th>
<th>Agree n(%)</th>
<th>P-Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB is a major public health threat in Pakistan</td>
<td>55(14.3)</td>
<td>66(4.3)</td>
<td>122(33.8)</td>
<td>-8.01</td>
</tr>
<tr>
<td>TB is not a serious threat at this time**</td>
<td>62(16.1)</td>
<td>35(9.1)</td>
<td>96(25)</td>
<td>0.45</td>
</tr>
<tr>
<td>Family members of confirmed TB case are not at risk of getting TB**</td>
<td>24(14.1)</td>
<td>92(23)</td>
<td>130(33.9)</td>
<td></td>
</tr>
<tr>
<td>The patient should be asked to seek chest specialist when coughing with blood</td>
<td>16(4.2)</td>
<td>16(4.2)</td>
<td>167(45.5)</td>
<td></td>
</tr>
<tr>
<td>Suspected TB people should be advised to consult a doctor as soon as possible</td>
<td>92(2.3)</td>
<td>21(0.6)</td>
<td>175(41.3)</td>
<td></td>
</tr>
<tr>
<td>TB infected women should be advised to discontinues breastfeeding her child**</td>
<td>46(12)</td>
<td>27(7)</td>
<td>120(31.3)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Continues medicine intake without interruption is not essential to cure TB**</td>
<td>36(9.4)</td>
<td>16(4.2)</td>
<td>147(40.3)</td>
<td></td>
</tr>
<tr>
<td>If someone gets infected with TB, he/she should not talk to anyone about the illness**</td>
<td>33(8.6)</td>
<td>15(3.9)</td>
<td>148(37.8)</td>
<td></td>
</tr>
<tr>
<td>When someone gets TB symptoms, he/she should not go to a locally facility before 3-4wks**</td>
<td>24(6.3)</td>
<td>38(4.2)</td>
<td>193(50.3)</td>
<td></td>
</tr>
<tr>
<td>We should be family &amp; supportive for TB infected persons</td>
<td>89(2.2)</td>
<td>182(4.5)</td>
<td>157(39.3)</td>
<td></td>
</tr>
<tr>
<td>In our catchment area, people usually take TB infected persons</td>
<td>27(0.8)</td>
<td>32(0.8)</td>
<td>162(41.3)</td>
<td></td>
</tr>
</tbody>
</table>

*p=x2/Fisher Exact test, **False/negative statements

Practices of LHWs regarding TB
Average median practices score among LHWs was 45 (IQR=9). Overall attitude of 205 (53.4%) LHWs regarding TB were found as not good. Significant Practices difference of LHWs regarding TB was found significant for all variables with p-values <0.001. [p=x^2/Fisher Exact test] (Table 3)

Table 3: With sufficient knowledge, LHWs practices regarding Tuberculosis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Never n(%)</th>
<th>Sometimes n(%)</th>
<th>Always n(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health education messages on TB are given only on World TB Day*</td>
<td>71(18.5)</td>
<td>16(4.2)</td>
<td>104(27.1)</td>
</tr>
<tr>
<td>Health education on TB is generally not done by family members of suspected or confirmed TB case*</td>
<td>71(18.5)</td>
<td>16(4.2)</td>
<td>104(27.4)</td>
</tr>
<tr>
<td>TB awareness sessions are given to patients and their families at clinical settings*</td>
<td>99(26.8)</td>
<td>21(5.5)</td>
<td>71(19)</td>
</tr>
<tr>
<td>Suspected TB cases are referred to nearest basic health unit for confirmation and management*</td>
<td>167(45.5)</td>
<td>18(4.7)</td>
<td>82(2.1)</td>
</tr>
<tr>
<td>The national TB program is not the first choice for referral of suspected TB cases</td>
<td>44(11.5)</td>
<td>39(10.8)</td>
<td>115(29.9)</td>
</tr>
<tr>
<td>In 2015, medicines are given to patients daily*</td>
<td>86(4.6)</td>
<td>172(4.2)</td>
<td>175(45.6)</td>
</tr>
<tr>
<td>Patients on anti-tuberculosis drugs should not be monitored*</td>
<td>95(9.4)</td>
<td>16(4.2)</td>
<td>141(35.7)</td>
</tr>
<tr>
<td>We should follow the suspected TB patient after referral</td>
<td>20(5.2)</td>
<td>16(4.2)</td>
<td>104(27.4)</td>
</tr>
<tr>
<td>We should counsel any TB case in our catchment area*</td>
<td>27(0.6)</td>
<td>16(4.2)</td>
<td>167(39.3)</td>
</tr>
<tr>
<td>We provide anti-tuberculosis medicines to a TB patient of our catchment area*</td>
<td>97(25.3)</td>
<td>7(1.8)</td>
<td>89(22.2)</td>
</tr>
<tr>
<td>The national TB program does not provide us anti-tuberculosis medicines</td>
<td>97(25.3)</td>
<td>11(2.8)</td>
<td>89(22.1)</td>
</tr>
<tr>
<td>We regularly attend TB information session or training*</td>
<td>149(38.8)</td>
<td>13(3.5)</td>
<td>20(7.6)</td>
</tr>
<tr>
<td>If any family member gets infected with TB, we advise them to keep the TB patient alone*</td>
<td>86(41.7)</td>
<td>7(3.4)</td>
<td>118(58.7)</td>
</tr>
<tr>
<td>Women on anti-tuberculosis drugs must be advised to delay conception at least 6 months of stopping it</td>
<td>18(4.4)</td>
<td>1(0.2)</td>
<td>164(39.7)</td>
</tr>
</tbody>
</table>

*False/Negative statements

Comparison of LHWs knowledge, attitude and practices score groups
A significant difference was found between LHWs knowledge score of those who had insufficient (28.08 ± 4.7) and those who had sufficient (32.8±4.7) knowledge about TB.
3.1) and sufficient knowledge (28.08 ± 3.1) with p-value <0.001 (p=Independent sample t-test). Also good attitude (median 47.5, IQR 6) and good practices (median 51, IQR 7) of LHWs differ significantly from those who not have a good attitude (median 35.5, IQR 8) and practices (median 41, IQR 5) with p-value <0.001. [p=Mann-Whitney U test]

Qualitative results

Knowledge regarding TB Causes

Qualitative results showed that all the LHWs mentioned TB as a viral disease. Majority of LHWs also assumed it as a hereditary disease.

"TB runs in families and transfer through genes. In a family, if some elder one or grandparents had this disease, chances for children to become infected with it increase. Most of the time, it happens". (FG1, Participant 1, 3)

Signs and symptoms of TB

Most of LHWs responded cough >3 weeks and low grade fever as TB symptoms. Many LHWs also mentioned weight loss, and night sweating as its other signs and symptoms. While only few LHWs knew coughing up of blood, chest congestion, lethargic feeling, and body ache as other signs and symptoms of TB.

"Fatigue and continuous cough, especially more than for 15 days is alarming sign of TB. Some patient complaint for cough, fever and feels the body aches, especially in night times; if condition does not improve after going to doctor or taking anything like medicines, then such situation alerts us and we doubt such patient as TB case......." (FG3, Participant 1, 5)

Sites of TB involvement

Almost all LHWs were enough aware about its lung involvement but majority of them thought that TB affects only the lungs. Few mentioned that it could infect any body part.

"T.B is of many kinds just like intestinal T.B, TB of the lungs, chest, bones etc. It can also infect the brain. (FG 1, Participant 1)

Population at TB Risk

According to LHWs, populations at risk of TB are those who live in dirty places or in overcrowding, old persons, children, poor, & are malnourished.

Safety measures for TB

Majority of LHWs replied clean environment; healthy food; use of hand kerchief during coughing or sneezing; utensils separation; and proper disposal of patient sputum as necessary safety measures to prevent TB spread.

"We know that TB is transmittable disease which can be transferred from one person to another, so we advise patients to cover mouth with a piece of cloth while coughing, do not spit anywhere, instead spit in one separate pot and then cover it with sand/mud. (FG 2, Participant 3)

Knowledge and practices of LHWs regarding TB diagnosis and treatment

About TB diagnostic tests, the majority of LHWs replied that X-Ray chest; sputum examination test; and blood CP are available in X public hospital (secondary). LHWs also mentioned that the majority of the patients go to special chest centre alongwith Hilal Ahmar hospital for the tests.

Most of the respondents mentioned that 6-8 months course of anti-TB drugs was necessary for its cure.

"First, doctors used to give medicine for 9 months, but from previous few years, treatment duration has changed and now they are giving medicines for 6-8 months." (FG 1, Participant 1)

Majority of the participants responded that they did not receive any anti-TB medicines for quite some time. Patients get medicine from referral centers by themselves.

"No, the medicines of T.B are neither available in our center nor they are supplied to us. Patients have to go to the Bhaiati hospital". (FG 1, Participant 1)

Attitude and practices of LHWs regarding TB Stigma about TB in community

LHWs told that TB related stigma still exists in the community; people hide TB and start its treatment secretly. Only a few reported that suspected TB patients to easily get ready for diagnostic test and do not oppose. Majority mentioned that people did not want to disclose their disease. Mostly unmarried girls hide these kinds of diseases because they think it might cause a barrier for their marriages.

"People hide this disease because they think that everyone will get rid of us, as they won't talk to us, not sit with us, won't eat with us etc. So because of this they do not start the treatment." (FG 1, Participant 8)

"There was an unmarried girl in my area, her mother came to me and said, "Take a GOD's swear that you won't tell this to anyone". I said alright but at least tell me first what happened. Then she told me that her daughter was affected by TB but they didn't know what to do and where to go. So I told her not to worry, I took her daughter to the doctor for treatment........" (FG 1, Participant 8)

LHWs' practices regarding follow up of TB cases

Majority of LHWs responded that they go to TB patients on weekly or monthly basis for checking and asking them about medicines intake, whether they are taking medicines regularly or not.

"When we provide TB medicines to any patient, then while doing polio campaign once or twice in a month, we also remind TB patients to take their medicines daily without gap". (FG 2, Participant 7)

Problems faced by LHWs regarding TB Referral and follow up of TB patients

Regarding referral of TB patients to public hospitals, the majority of the LHWs complained that their referral slip did not get any response or importance. Doctors usually rejected their referral slip, and hence it had no value.

"Private Doctors give time to patients and treat carefully.
Otherwise, if we get them to X hospital (public hospitals), lady doctors don’t check them properly, no matter, we go along with the patient, and they even do not give us a response. Male doctors are better than female doctors in this respect.………" (FG 2, Participant 2)

"…….but now X hospital (previously defined) is not taking TB cases. They are asking for a government service card for treatment. We are confused about TB patients’ referral site." (FG 2, Participant 2)

Almost all LHWs also complained about their workload or overburden. Most of time, LHWs remain involved in other vaccination campaigns, which hinder the daily follow up of TB patients. So majority of them follow TB patients on weekly or monthly basis.

**Trainings of TB**

Trainings were identified as a serious gap in program implementation. All LHWs agreed that it had been a decade or more that they could not get any proper and in-service TB training. They felt themselves as untrained for their TB related works. According to them, nobody gave them any information about TB. They mentioned that, after a long time, this TB topic was being raised on that day, for listening and talking about TB.

**Suggestion of LHWs about TB**

According to them, TB related refresher trainings should be done for LHWs in every six months or at least once in a year.

"The TB trainings should be practiced in the same way as training of polio is practiced, so that we remain updated about its symptoms, treatment and precaution" (FG 1, Participant 2)

Almost all of the LHWs became agreed on the point that their own or most nearby centres should be TB patients’ referral centres where all TB related facilities must be available.

"In our opinion, there should be one place or center, where we feel easy to send TB patient; and from where people could get TB medicines easily along with its information. In this way patient becomes more satisfied……." (FG 2, Participant 8)

**Discussion**

The correct information and updated knowledge of signs and symptoms of TB, is essential for its early diagnosis and treatment, and is the most effective for TB control. In our study, sufficient knowledge about TB was found in 50.3% of the participated LHWs. The result was lower than the result of the study conducted in West Gojam which shows sufficient knowledge as 74.4% and survey results of hospital staff in South Africa by Kanjee Z et al (8). This finding was also lower than the results of study done in Iraq by Hashim et al. 90.2% (9). Hoa et al found that health providers of the rural Vietnam had an average knowledge score of 67.0% which is also better than the results of our study (10). In a Russian study done by Woith et al. the overall knowledge scores on TB and IPC and HCWs was low, which seems same to the present study (11). This study results are quite better than the study of Jamaica by White ZN, which indicate less than 40% of respondents had good knowledge of TB (12).

According to the results of this study majority of respondents reported insufficient knowledge of TB transmission, predisposing factors, diagnosis, treatment and prevention. Bhebhe LT and et al. concluded in their study that most respondents (89.2%) had appropriate knowledge of transmission, diagnosis and prevention of TB (13). According to the results of another study by Kiefer in 2009, most participants scored between 57.8% and 85.0%, which falls within the fair and excellent range of knowledge scale (14).

In present study only 41.4% LHWs know that TB is caused by bacteria. Result for this variable were much high in Madhya Pradesh study in that 80.4% knew that fact (15). In our study, majority (84.4%) of LHWs considered X-ray as a diagnostic tool for tuberculosis. Results are similar to the study of Madhya Pradesh (15). This study found that participants had many inaccurate perceptions in terms of tuberculosis cause and transmission. They believed that TB spreads by eating with patients, direct contact with TB infected person’s skin, and through having sexual relation with TB patient. Participants thought that tuberculosis is transmitted in the same fashion as other infectious diseases such as human immune-deficiency virus (HIV/AIDS) or hepatitis C. These beliefs have been reported in different populations like migrant farm workers (16) and Vietnamese refugees (17). About 94 % of respondents of this study believe that TB is curable, and can be treated mainly by medicines. Same results were produced in the studies of India (18).

In this study, for 53.4 % of LHWs source of TB information was health department, 57% reported source of information as national TB control programme. About 38.3% and 28.6% obtained information through TV and radio programs respectively. In Iraq, main sources of TB information, were health workers, teachers, friends/relatives, newspapers and television (19).

Cooperation and team work is essential in the fight against TB. In this study, good attitude was found in 46.6% of the respondents. The percentage is better than Madhya Pradesh study. It showed that attitude and practice was good in 36.3 % of DOTS providers (15). Results contrast with the study done by Lertkanokkun S, and et al, more than half of the providers had a positive attitude towards TB and its care (20), and also contrast with Ethiopian study, which indicate 63.2% good practice on TBIC (21).

Overall practices of 53.4% of LHWs regarding TB were found not good in the participants of this study. Same unsatisfactory practices results (51.7%) were presented in the study of Ethiopia towards tuberculosis infection control (22).

**Conclusion of the Study**

In conclusion, the level of knowledge about TB amongst LHWs, at the study site was not at an acceptable level.
Overall attitude and practices of majority of LHWs was not found good. An educational intervention is recommended for LHWs in Latifabad, Sindh.

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**Conflict of interests**
The authors declare that they have no conflict of interests whatsoever in conducting and publishing this study.

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**IMMUNIZATION STATUS OF UNDER 5 YEARS MIGRANT CHILDREN COMING TO URBAN SLUMS OF HYDERABAD PAKISTAN**

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**Abstract**

**Introduction:** The uncontrolled population growth due to migration, industrialization and natural increase, fast trends in migration towards big cities and emergence of new infections and low agenda of health facilities toward slum areas of big cities, it is better to understand the vaccination status of slum areas including methods and strategies how to further enhance it in these areas.

**Objectives:** The objectives of this study were to assess the status of immunization and identify factors associated to it among under five year migrant children living in urban slums of Qasimabad in District Hyderabad.

**Material and Methods:** A cross sectional survey was conducted to assess the status of immunization and identify factors associated to it among under five year migrant children living in urban slums of Qasimabad in District Hyderabad. A pre structured and translated questionnaire was developed in order to interview the participants, the sample size was calculated on the prevalence of immunization status in the country, the sample size was 86. Data analyses was done on SPSS version 20.0 and MS excel was also used for tables and graphs.

**Results:** Findings showed that almost half of children (53.5%) were vaccinated while 46.5% were found non-vaccinated. Among total of eight vaccines the highest coverage was of BCG and OPV0 which were about 52% for each, secondly penta1 coverage was around 47.7%. Coverage of Measles 1 was greater than in comparison with Measles 2. Reasons for high coverage of OPV and Measles 1 was may be because of consistent campaigns at national level which usually focuses on these two vaccines. Availability of vaccination card among total interview participants (86) was found in only 34.4%.

**Conclusion:** It is concluded that, there is low coverage of immunization among the migrants children less than of five years residing in urban slums of Hyderabad. Absence of awareness and belief in parents about vaccination and its importance are the major factors for unvaccinated children. All these findings draw attention that there is severe need of education of community, awareness and building of social, economic and public health infrastructure.

**Key Words:** Migrants, immunization coverage

**Introduction**

Vaccination is a way through which one can be made resists against any infectious disease or prevents a person by vaccine preventable disease by providing vaccine for long time or even lifelong. Vaccine is an effective preventive measure which triggers defense mechanisms of host and subsequently provides protection against infection (1). It is reported that every year more than one hundred million children get vaccination before completion of their first birth day celebrations. Worldwide around 24 million children age under one year could not reached for vaccination every year (2).

In Asian Continent, the immunization coverage is poorest among rest of world. The National Population Policy (NPP) 2000 sets the national socio demographic goals to achieve universal vaccination coverage by year 2010 against vaccine preventable diseases (VPDs) (3). Over past two decades the statistics regarding immunization in Pakistan improved, and the fully coverage increased from 35% in year 1990 to 54% in 2012-13, and the no vaccination rate against any of vaccine preventable disease fall from 28% to 5% which shows some sign of improvement and increase commitment of stake holders towards EPI program, which definitely will provide fruitful results in near future (4).

The Pakistan Government launches Expended Program on Immunization in 1978, with main aim to reduce child morbidity and mortality; program was initiated with six vaccine preventable diseases, and later on in 2005 further addition of hepatitis B vaccine, and recently new vaccine against Hemophilus influenza introduced. Now Pakistan’s national EPI program runs...
immunization against nine vaccine preventable diseases (5). The major drawback of our EPI program is to focused mainly on percentages however the number of high population living in slum areas are not on agenda of health authorities to be vaccinated, also there are many challenges to EPI program, in term of availability, accessibility and affordability, but whatever is available is under the question of quality and not focused vision even without targeting to slum population which contribute a large number of community sitting around cities (6).

The United Nations Human Settlements Program (UN-HABITAT) defines that, those having no permanent durable housing, having no sufficient space for living, no any easy access to safe water, lack of proper sanitation or public or private toilet facility and security of tenure are slums or called other than households (7). Therefore this study will provide the baseline information not only regarding the immunization status of slum settlements under five populations but also provide various factors contributing low immunization coverage in slum areas.

Materials and Methods
A cross sectional study was designed for collecting the data from the mothers of migrant’s children less than five years age in urban slums of Qasimabad in district Hyderabad. The calculated sample size of the study participants was 86. Data was collected through pre structured questionnaire, questionnaire was adopted from previous studies and some modifications were also incorporated to serve the purpose, questionnaire was divided into three parts first was of socio-demographic and economic part which contained questions, second part of the questionnaire was to assess the immunization coverage and the third and last part of the questionnaire was related to factor identification that can influence or hinder the immunization coverage. After collecting the data it was put in to SPSS 20.0 version for getting means, frequencies and chi square tests and analyzed through same software along with drawing table and graphs in Microsoft office in Microsoft word and excels for getting results and conclusion of the study.

The ethical approval was obtained from internal review board of Health Services Academy, Islamabad. Written informed consent was obtained from the patients/participants before filling the questionnaire. Strict anonymity and confidentiality is maintained for participants as only codes have been used instead of original names of the participants.

Findings
Table 1: Socio-economic and demographic Findings

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>FREQUENCIES (n=86)</th>
<th>PERCENTAGES (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education of Child’s Mother</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literate</td>
<td>21</td>
<td>24.4%</td>
</tr>
<tr>
<td>Illiterate</td>
<td>65</td>
<td>75.0%</td>
</tr>
<tr>
<td>Mother Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>71</td>
<td>82.6%</td>
</tr>
<tr>
<td>Other status</td>
<td>15</td>
<td>17.4%</td>
</tr>
<tr>
<td>Occupation Of Mother</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>85</td>
<td>100%</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muslim</td>
<td>86</td>
<td>100%</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Family Income/Month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 10000</td>
<td>76</td>
<td>88.4%</td>
</tr>
<tr>
<td>More than 10000</td>
<td>10</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

With context to the vaccination card and mothers recall, children who ever took a vaccine was 53.5%. OPV was in general the most taken vaccine from the other eight vaccines. Particularly, BCG and OPV0 was the predominant vaccine taken by children (52% for each) whereas lowest vaccine taken by children (52% for each) whereas lowest coverage was seen for Measles2 vaccine (33%).

![Figure 1: Immunization coverage of children under 5 years of age](image)

Statistical significant association is seen between the sex of child, their place of delivery, parent’s educational status, antenatal care history and their immunization status on the basis of chi square test.

Table 1: Association between variables of interest

<table>
<thead>
<tr>
<th>Variable</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex of Child</td>
<td>.003*</td>
</tr>
<tr>
<td>Place of Delivery</td>
<td>.239</td>
</tr>
<tr>
<td>Education of Mother</td>
<td>.004*</td>
</tr>
<tr>
<td>Child’s Father Education</td>
<td>.000* (&lt;0.001)</td>
</tr>
<tr>
<td>Antenatal care</td>
<td>.02*</td>
</tr>
<tr>
<td>Average Time To Reach The Centre</td>
<td>.62</td>
</tr>
<tr>
<td>Importance Of Vaccination</td>
<td>.302</td>
</tr>
</tbody>
</table>
Participant's response for the reasons for low vaccination or the migrant child who did not receive even a single dosage of vaccine was assessed by asking their caretakers by asking certain questions. Their response is shown below

**Table 2: Reasons for vaccination failure in migrant children**

<table>
<thead>
<tr>
<th>REASONS</th>
<th>FREQUENCIES (n=86)</th>
<th>PERCENTAGES (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't believe in vaccination</td>
<td>48</td>
<td>55.8%</td>
</tr>
<tr>
<td>There was long que in vaccination center</td>
<td>77</td>
<td>89.5%</td>
</tr>
<tr>
<td>Don’t remember the date of vaccination</td>
<td>83</td>
<td>96.5%</td>
</tr>
<tr>
<td>Vaccination centers are too far</td>
<td>49</td>
<td>57.0%</td>
</tr>
<tr>
<td>There was no vaccine in center</td>
<td>25</td>
<td>29.1%</td>
</tr>
<tr>
<td>There was no vaccinator in the center</td>
<td>26</td>
<td>30.2%</td>
</tr>
<tr>
<td>Injection was too pain full for the child</td>
<td>67</td>
<td>77.9%</td>
</tr>
<tr>
<td>Had abscess at the place of vaccine</td>
<td>18</td>
<td>20.9%</td>
</tr>
<tr>
<td>Vaccinator was not friendly</td>
<td>35</td>
<td>40.7%</td>
</tr>
<tr>
<td>Sick child</td>
<td>46</td>
<td>53.3%</td>
</tr>
<tr>
<td>Vaccinator will come home</td>
<td>74</td>
<td>86.0%</td>
</tr>
<tr>
<td>Vaccinator charged money</td>
<td>21</td>
<td>24.4%</td>
</tr>
</tbody>
</table>

**Discussion**

This study was designed to assess the status of immunization and identify factors associated to it among under five year migrant children living in urban slums of Qasimabad in District Hyderabad. On the basis of mother's knowledge about vaccine and vaccine preventable diseases about sixty five percent of mothers said that they have heard about vaccination and diseases prevented by it. About 41.9% of mothers were of the fact that Vaccination is used for the prevention of diseases which is the true objective of immunization. During this study it was found out that very little number of mothers had knowledge on vaccine preventable diseases which could be protected through immunization.

The conducted study also aimed at identifying the factors which can be associated with the immunization status of children. On the basis of study's findings it has been observed that there was a significant association between children's immunization status and educational level of their parents with p value of 0.004. Statically significant association was also found between educational status of child's fathers and children's immunization status with p value of 0.000. However, marital status of mother showed association with child immunization status. Among the child's characteristics, gender had association with status of immunization however place of deliver showed that there was no association with the child's immunization status. These findings are similar with studies from other places which indicated that the male children are found to be more vaccinated than females (8).

Finding of my current showed that 53.5% of children were immunized and 57% of children had accessibility to vaccination service which indicated that 46.5% of children population was benefitting from the vaccination service and 53.5% of children were not getting benefited from the vaccination services. Similar findings were found in a study conducted in Gambia showed that immunization achieved by the children by one year of age during the study period was observed in more than half of the children (52%). Immunization status was low for children who were residing in city which highlighted the fact that a major proportion of population was not getting benefit of safety against common childhood diseases (9).

Finding of this study revealed that maternal literacy level is significantly associated with the total vaccination coverage of Children. Children of mother were literate were found to be with better Immunization status (80%) than of those whose mothers were illiterate (50%). Similar findings were found in a study conducted in Dhaka to assess the relationships between educational status of mother and immunization status of their children. Its findings showed the significant association between maternal literacy level and status of immunization of their child. It proved that mother awareness regarding vaccination and preventable diseases is an important factor towards better immunization status of their children (10).

**Conclusion**

Finding of the study concludes that the sex of the children, accessibility of vaccination services and mothers antenatal follow up are associated with the immunization status of children. Study concludes that main reasons for the defaulted children are due to the unavailability of health professionals at institutes, in adequate timing of vaccination and information lacking about the subsequent doses for the immunization of their children. With all these findings the absence of awareness and belief in parents about vaccination and its importance are the major factors for unvaccinated children. All these findings draw attention that there is severe need of education of community, awareness and building of social, economic and public health infrastructure.

**References**


PROFESSIONAL GROOMING OF NURSES: COMPARISON BETWEEN PUBLIC AND PRIVATE SECTOR HOSPITALS OF PESHAWAR, PAKISTAN

Syeda Farishta¹, Hira Ejaz¹, Sana Iqbal¹, Fatima Iqbal¹, Tabinda Zaman¹, Shahzad Ali Khan³

¹Sarhad University Islamabad Campus, ²MIHS, ³HSA Islamabad

Abstract

Background: Professional grooming of nurses and career development opportunities are integral part in promoting the key roles of nurses played in development of health care system. The present condition of nurse's workforce in Pakistan is really alarming. This profession needs to gain attention by the Government of Pakistan as well as private sector to fill the gap between the demand and supply in the market. Professional grooming of nurses is the provision of opportunities for continuous professional education, regular training sessions, improvement in skills and opportunities to attend seminars/workshops/symposia.

Objective: To compare professional grooming prospects for nurses in public and private sector hospitals of Peshawar.

Methodology: Data was collected from 200 nurses (male and female) from Rehman medical institute (RMI- a private sector hospital) and Lady reading hospital (LRH- a public sector hospital) Peshawar. 100 respondents were from public sector and 100 were from private sector hospital. Convenient sampling method was used. Data was collected through interviews by using self structured questionnaire. Data was cleaned and analyzed using SPSS 17.

Results: The study was carried out on 200 subjects with private and public hospital ratio of 1:1. Among the respondents of both private and public hospitals most of the nurses (54%) were in the age group of 30-34 years. Majority of respondents were females (57%). Results showed that private sector nurses were relatively more qualified than its counterpart. It is also evident that private health care sector is providing better opportunities of professional grooming, on the job training, improvement in skills and career opportunities to their nursing staff in comparison to public health care sector. Opportunities to attend seminars/conferences/symposia are more in private sector hospitals. Similarly, the working environment is also better in private hospital.

Conclusion: Private health care sector is more conscious about induction of qualified and trained nursing staff as compare to public health care sector. There is better professional grooming, congenial working environment and more on the job training opportunities for nurses in private health care sector.

Keywords: Nurses, professional grooming, public, private

Introduction

Amongst professions of health care in the country nursing plays a vital role. They are the care units of the hospitals. Grooming of nurses and career development opportunities are integral in promoting the key roles of nurses played in development of health care system. The present condition of nurse's workforce in Pakistan is really alarming. This profession needs to gain attention and it should be given full attention by the Government of Pakistan and private sector to fill the gap between the demand and supply in the market of these professionals.

Professional grooming of nurses is the provision of professional education to the nurses, regular training sessions to improve their technical skills, developing them for up gradation this is to making them compatible in education skills and other required expertise (1) and also providing opportunities of training during the job called as on job trainings (2). There is lesser number of nursing schools then the demand of these professionals. The irony is that the number of Medical and dental colleges are increasing day by day as compared to nursing schools. Due to the difference in functioning of the both Public and Private sectors hospitals they treat their nursing workforce differently. Public sectors hospitals are preferred over private because of its long term benefits and minimal chance of termination from their positions (3). Moreover public sector is preferred because they mostly perform technical skills and are never burdened from work. Conversely, the private sector make grounds on economic conditions they have very less chances of protections of their rights (4). Workload and strict rules are tiring for the nursing stuff (5). Besides its work load and tough routine they are preferred for their better environment and especially few private institutions of
Pakistan are operating at international level this provide much more facilities then the usual public sector hospitals and some of private sectors. These institutions facilities and protection are much more. Also they follow every aspect of Human resource for health (HRH) protections rights.

Better professional grooming opportunities give more job satisfaction and relief to the nursing staff. They enjoy competitiveness and assertion. To attain the goals of health care system in the country it is necessary to expand the access, improving the quality and safety of the health care units and it can only strengthened with the development of the nurses workforce in the country(6).

**Methodology**

This descriptive study was carried out at Lady Reading Hospital and Rehman Medical Institute of Peshawar in 2016. Study population comprised of 200 Nurses (male as well as female). 100 respondents were from public sector and 100 were from private sector hospitals.

Study was conducted after approval from the SUIT and Hospitals Ethical Committees. Data was collected after obtaining informed written consent from the respondents. Convenient sampling technique was used. Data was collected by interviewing the respondents and by using a self-administered questionnaire. The questionnaire was pretested and necessary changes were made. Data was cleaned and analyzed using SPSS 17.

**Results**

The study was carried out on 200 subjects with private and public hospital ratio of 1:1. Among the respondents of both private and public hospitals most of the nurses (54%) were in the age group of 30-34 years. Majority of respondents were females (57%). Results showed that private sector nurses were relatively more qualified than its counterpart. Following table shows the qualifications of respondents in both sectors.

<table>
<thead>
<tr>
<th>Qualifications of respondents</th>
<th>Private hospitals</th>
<th>Public hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>Percentage (%)</td>
<td>Frequency</td>
</tr>
<tr>
<td>BSN</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Masters</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Nursing Diploma</td>
<td>37</td>
<td>39</td>
</tr>
</tbody>
</table>

Majority of the respondents have service tenure of 6-10 years both in private and public sector hospitals. Most of the private sector nurses were of the opinion that nursing profession is taken as the respected profession by the general public. They were of the opinion that with the time nurses from good families are also joining this profession.

Regarding grooming of nurses, it was evident that in private hospitals opportunities of professional training, on the job training, improvement in skills are better than public sector hospitals. Also opportunities to attend seminars/conferences/symposia are more in private sector hospitals. Similarly, the working environment is also better in private hospital. The only area in which the public sector hospitals are ahead of private sector hospitals is the job security. Hiring and firing is not that easy in public sector as compare to private sector.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Private hospitals</th>
<th>Public Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement</td>
<td>Disagreement</td>
<td>Neutral</td>
</tr>
<tr>
<td>Hospital arranges training</td>
<td>55</td>
<td>35</td>
</tr>
<tr>
<td>There are opportunities for on the job training</td>
<td>59</td>
<td>24</td>
</tr>
<tr>
<td>Provides Grooming perspective through training</td>
<td>48</td>
<td>39</td>
</tr>
<tr>
<td>Arranges state of art equipment for increasing awareness of technology</td>
<td>60</td>
<td>19</td>
</tr>
<tr>
<td>Provision of incentives to improve job environment for nurses</td>
<td>78</td>
<td>14</td>
</tr>
<tr>
<td>Better working environment</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>Hospital in seeking career ventures for nurses</td>
<td>58</td>
<td>20</td>
</tr>
<tr>
<td>Job security is ensured by hospital</td>
<td>19</td>
<td>64</td>
</tr>
</tbody>
</table>

Study results showed that management of private hospitals is more conscious about the grooming of nurses professionally as compared to the public hospitals. Nurses from private hospitals reported that they are helped by their management in career development aspects but public hospital nurses denied in this aspect, results were following:

**Figure 1: Career development of nurses by the management**

Nurses in private hospitals are more capable of solving problems and working for welfare of patients than the nurses of public hospitals. Similarly, the nursing staffs of the private hospitals have high morale than staff of public hospitals. The results of the study are clearly providing that private hospitals are contributing more in the grooming of their nursing staff than the public hospitals.

**Discussion**

Nursing staff is the backbone of health care delivery system of any country. If nurses are not fully qualified, skilled and knowledgeable, the health and life of the
patient is at stake. In Pakistan not only nursing colleges/institutions are deficient but are also under staffed with improperly qualified faculty. According to the study results majority of nurses in public sector was diploma holder, only 15% was holding master degree. In a study carried out in Pakistan by Shehzad and Malik, it was highlighted that there was gross shortage of nurses in the health care delivery system. They said that work load and burden of the patients has not been shared by the adequate nursing staff that ultimately results in frustration and stress(7). They suggested that problem of workplace violence should be removed so that the nurses can work with no stress and they perform their duties effectively (8). Systems research have shown that nursing sector in Pakistan have fewer opportunities for professional growth, as there are little on the job training facilities (5). Studied carried out on nurses of Pakistan showed that majority of nurses themselves are not satisfied with different aspects of their profession. The nursing profession should not have gloomy future therefore it is foremost responsibility of the government and private sector to solve their issues. There should be policies for career development and better salary structure. There is need of attention to this field and also helping them for the sustenance of this profession. There will be bright future ahead if the problems were solved. This profession will also gain a place amongst the other mainstream professions in our society as well. Society only needs awareness and help it would be of no issue that nursing profession will be treated with respect.

**Conclusion**

Private health care sector is more conscious about induction of qualified and trained nursing staff as compared to public health care sector. There is better professional grooming, congenial working environment and more on the job training opportunities in private health care sector.

**Recommendations**

In order to improve the performance and efficiency of the nursing work force there is a need of proper professional capacity building trainings of nursing staff.

**References**

ASSESSMENT OF COMPLEMENTARY FEEDING PRACTICES OF MOTHERS IN 6-24 MONTHS CHILDREN IN UNION COUNCIL KAPLOR, TALUKA, AND DISTRICT UMERKOT

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Abstract

Introduction: On the child mortality and morbidity, under nutrition play essential role for dealing with different challenges and gain sustainable development advantage. However, delay in giving breast feeding, colostorum deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and incorrect weaning from breast milk are the commonly found practices in communities (Australia, India, Ethiopia) around the world.

Objectives: For this research study, there are two objectives made that include (i) To assess the complementary feeding practices in mothers of children aged 6 to 24 months in union council Kaplor (ii) To determine the nutritional status of children aged 6-24 months.

Results: This study represented the results in which poor practices came in population. Prelacteal feeding was common practice (83%) and ghuttee was the commonest first feed (52%). Frequency of meals in last 24 hours was recorded, as three meals were common practice (47.5%). Age of the introduction of the complementary feed was 6-8 months in 37.5%. Only few had taken meat in diet in last 24 hours (1.4%).

Conclusion and Recommendations: Over all this was obvious from the findings of our study that poor practices were common in the community. Practices of the prelacteal was common and early introduction of the complementary feeding in more than 50% cases. It is highly recommended that counselling during antenatal visits and at the time of vaccination can be the strategy to change the behavior of the mothers.

Key words: Weaning, mothers, practices, rural areas, developing country.

Introduction

The children are the future of every country in this world. When they are born until they reached at 24 months age, need their mother breast-feeding. This help them to decrease the ratio of death and help to gain malnutrition more. Similarly, the level of childhood malnutrition remains unacceptable throughout the world and is playing a major role on child mortality and morbidity (1). Global estimates of under nutrition in 2011 showed that 165 million, that is 26% of children below the five years were stunted (52 million), 8% were wasted and (101 million) 16% were underweight. This burden of under nutrition has a higher prevalence in sub-Saharan Africa compared to other regions. It has been estimated that 56 million (36 per cent) children under-five in Africa are stunted, 13 million (9 per cent) are wasted and 28 million (18 per cent) are underweight (2).

Pakistan is a lower middle income is nearly a quarter of the population is unable to buy the nutritional requirements (2,350 calories per day) of an adult (3, 4). UNICEF reports that 1200 children are dying every day in Pakistan (5) More than one third of these deaths are due to malnutrition. Malnutrition contributes to the high under five mortality rates (73 per 1000 births) (6). In Pakistan 45% children are stunted, 11% are wasted 30% are underweight according to PDHS 2012-13 (7).

Exclusive breastfeeding is not practiced in many developing countries (8). Optimal breastfeeding is associated with long-term health and emotional benefits for the infant and reduces child morbidity and mortality (9), (10). In 2012 only 39% of children were exclusively breastfed for the first six months of life and the proportion of children who were put to the breast within one hour of birth was 42% (6). Breastfeeding is started within the 1st hour of birth in (41%) of children in Pakistan, (51%) in Sindh and only (68%) children continued breast feeding for six months of age (11).

With growth of child his requirements of food changes, so, it is important to add supplementary food along with breast milk, starting with liquid foods and slowly adding solid foods. This is the weaning (now complementary feeding) process: the introduction of
foods other than breast milk into an infant’s diet while slowly reducing breastfeeding (12, 13). During the period of complementary feeding, a child requires foods that should be soft, hygienic, and energy- and nutrient-dense to meet the high nutritional requirements (12, 13, 14, 15).

Delayed initiation of breastfeeding, colostrum deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and incorrect weaning from breast milk are the commonly found practices in communities around the world (16, 17, 18). As mentioned earlier with recommended breastfeeding practices after 6 months, an infant will not be able to achieve his ideal growth, if he/she do not receive sufficient amount and quality complementary foods(19). Improved quality of complementary foods is one of the most cost effective strategies for improving health and reducing morbidity and mortality in young children (20). Interventions like counseling on complementary feeding and providing simple technologies to improve food preparation by caregivers of infants and young children are effective in reducing under nutrition in resource poor settings (21). Incorrect infant feeding practices pose significant risk of malnutrition among children under the age of 5 years (16).

These hot (dates, egg setc) and cold (banana, melon, rice etc) concepts about foods result in withholding of these foods in young children. This is also believed that these foods should be avoided by pregnant mothers to prevent the effects on growing fetuses (24). In this manner, the objectives are produce including the assessment of the complementary feeding practices within the mothers of children belong to aged in 6 to 24 month old presented in the union council Kaplor. It also include the determining objective of nutritional status of the children presented in age of 6 to 24 months.

Methods
Study design
This is a cross sectional study that was conducted among mothers of infants aged 6-24 months residing in peripheral union council Kaplor of Umerkot during the first two weeks of October 2015.

Sample size
The sample was calculated on the pre designed formula. (Universal sampling technique)

\[ n = \frac{z^2pq}{d^2} \]

\[ n = \frac{(1.65)^2 \times 0.39 \times 0.61}{(0.05)^2} \]

\[ n = 260 \]

By adding 10% of refusal rate n=280

This study contain universal sampling technique. All the mothers with their infants (6-24 months) residing in villages of union council kaplor at the time of interview were included in the study. Mother of those infants having chronic disease like T.B were excluded from the study as well as those infants who were suffering from the conditions like Cerebral Palsy, Celiac disease or any chronic disease were excluded from the study. This study contain universal sampling technique. All the mothers with their infants (6-24 months) residing in villages of union council kaplor at the time of interview were included in the study. Mother of those infants having chronic disease like T.B were excluded from the study as well as those infants who were suffering from the conditions like Cerebral Palsy, Celiac disease or any chronic disease were excluded from the study.

Data collection tool and procedure
The study was conducted in peripheral union council of district Umerkot with the involvement of trained LHWs after taking written permission (support letter) from the DHO Umerkot. Lady health workers (LHW) were trained accordingly by the primary researcher himself to take the measurements (weight and MUAC) of the children and conducting interview on the predesigned questionnaire where required. Questionnaire was adopted from ProPAN general survey(41) 24 hour recall and some changes were done according to local situation.

Ethical clearance
Ethical approval was obtained from institutional review board (IRB) of Health Services Academy Islamabad (HAS). Informed consents were also obtained from the study participants after explaining the purpose of the study. Participation of all respondents in the study was voluntary. Written and verbal consent was taken from the every participant of the study and confidentiality was maintained regarding the collected data.

Results
According to1 table of the 280 children/mother aged 6-23 months. The majority of the mothers were housewives working (75.7%). More than two third were illiterate while only 5% had primary education. Mean age of the mother was 28±4.68 years. Approximately 80% mothers had more than one child. Seventy seven percent of fathers were illiterate and 66% were laborer by profession. Most of the houses were made of local material (chownra) and total no of the residents in the household was 6-8 in 46% households.
Table 1: Socio-demographic characteristics of the participants

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20years</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>21-90years</td>
<td>88</td>
<td>31.1</td>
</tr>
<tr>
<td>91-120years</td>
<td>88</td>
<td>31.4</td>
</tr>
<tr>
<td>&gt;120years</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Mean and SD28.4±6.8(min=17,max=42)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;6000</td>
<td>48</td>
<td>17.1</td>
</tr>
<tr>
<td>6000-10000</td>
<td>186</td>
<td>64.4</td>
</tr>
<tr>
<td>11000-15000</td>
<td>33</td>
<td>12.9</td>
</tr>
<tr>
<td>16000-20000</td>
<td>8</td>
<td>2.9</td>
</tr>
<tr>
<td>&gt;20000</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Number of households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>25</td>
<td>8.9</td>
</tr>
<tr>
<td>5-6</td>
<td>93</td>
<td>33.2</td>
</tr>
<tr>
<td>7-9</td>
<td>129</td>
<td>46.1</td>
</tr>
<tr>
<td>5-8</td>
<td>25</td>
<td>11.8</td>
</tr>
<tr>
<td>Illiterate</td>
<td>218</td>
<td>77.9</td>
</tr>
<tr>
<td>Primary</td>
<td>56</td>
<td>19.9</td>
</tr>
<tr>
<td>Matric</td>
<td>33</td>
<td>12.4</td>
</tr>
<tr>
<td>Intermediate</td>
<td>7</td>
<td>2.6</td>
</tr>
<tr>
<td>Graduate</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Mother education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>260</td>
<td>92.9</td>
</tr>
<tr>
<td>Primary</td>
<td>16</td>
<td>5.7</td>
</tr>
<tr>
<td>Matric</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Intermediate</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Graduate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Profession of father</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Private</td>
<td>8</td>
<td>2.9</td>
</tr>
<tr>
<td>Shopkeeper</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Farmer</td>
<td>77</td>
<td>27.5</td>
</tr>
<tr>
<td>Labourer</td>
<td>189</td>
<td>67.5</td>
</tr>
<tr>
<td>Profession of mother</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Private</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Farmer and housewife</td>
<td>212</td>
<td>74.7</td>
</tr>
<tr>
<td>Housewife</td>
<td>67</td>
<td>23.9</td>
</tr>
<tr>
<td>Groom titles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karachi</td>
<td>41</td>
<td>14.6</td>
</tr>
<tr>
<td>Pakka</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Mixed type</td>
<td>58</td>
<td>19.6</td>
</tr>
<tr>
<td>Beard shawars</td>
<td>106</td>
<td>37.0</td>
</tr>
</tbody>
</table>

Table 2: Information regarding infants / children in study area

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of the infant/child in months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1months</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>7o12 months</td>
<td>121</td>
<td>43.2%</td>
</tr>
<tr>
<td>13o18 months</td>
<td>73</td>
<td>26.1%</td>
</tr>
<tr>
<td>18o23 months</td>
<td>77</td>
<td>27.5%</td>
</tr>
<tr>
<td>(Mean and SD 28.5±5.37)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>156</td>
<td>55.7%</td>
</tr>
<tr>
<td>Female</td>
<td>124</td>
<td>44.3%</td>
</tr>
<tr>
<td>Birth order</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>31</td>
<td>11.8%</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>17.9%</td>
</tr>
<tr>
<td>3</td>
<td>64</td>
<td>22.9%</td>
</tr>
<tr>
<td>4</td>
<td>155</td>
<td>41.4%</td>
</tr>
<tr>
<td>Children under five years in household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>66</td>
<td>23.6%</td>
</tr>
<tr>
<td>2</td>
<td>104</td>
<td>37.1%</td>
</tr>
<tr>
<td>3</td>
<td>108</td>
<td>38.6%</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Younger age in the household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;6months</td>
<td>45</td>
<td>16.1%</td>
</tr>
<tr>
<td>6o12months</td>
<td>119</td>
<td>42.5%</td>
</tr>
<tr>
<td>13o23months</td>
<td>116</td>
<td>41.4%</td>
</tr>
<tr>
<td>Anthropometry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midupperarm circumference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;11.5(Severe malnutrition)</td>
<td>20</td>
<td>7.2%</td>
</tr>
<tr>
<td>11.5-12.5 (Moderate malnutrition)</td>
<td>92</td>
<td>32.8%</td>
</tr>
<tr>
<td>&gt;12.5</td>
<td>168</td>
<td>60.0%</td>
</tr>
<tr>
<td>Mean and SD 12.9±0.77 centimeters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (in kilograms=kgs)</td>
<td>mean and SD 8.0±1.75</td>
<td>(min &lt;3.7kgs, max=13.3kgs)</td>
</tr>
<tr>
<td>weight for age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7% &lt; 100 and 10% 150</td>
<td>59</td>
<td>20.4%</td>
</tr>
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The table 2 presents the infant/child characteristics who participated in the study, male and female were 55.7% and 44.3%, respectively. The majority were between 7 to 12 months of age, i.e. 43%. Most of the children were >4 number in birth order and only 18% were 1stborn. In the under-five in household categories, there were two children in 37% cases and 3 children in 38.6% cases. In the household, there were 6-12 months younger’s age in 42% participants and 1 ≤ 18 months in 41.4% participants. Whereas midupperarm circumference calculated were <11.5 in 7.2% of children belonging to severe malnutrition on MUAC basis, 11.5-12.5 in 32.8% moderate malnutrition cases and in 60.2% it was noted to be normal ie>12.5. Mean for the midupperarm circumference was recorded to be 12.9±0.77 centimeters. Z-scores for weight for age found to be around 7% were below the <3 SD and 30% below the ? 2SD based on WHO anthro version 3.2.

Children participating were ever breast while the prelactal feed was given in 83.2% cases and in 48% cases breast feed was started within one hour of delivery and 32% were fed after one day. It was observed that ghuttee and animal milk were major prelactal feeds types in 52.2% and 24.6% respectively.
More than half mothers were continuing breast-feed while 26.8% had stopped breast feeding their infant/children. Those who had stopped breast-feeding (n=75) 1.8% of them at 718 months while 1.4% stopped at<6 months and 15% between 6-12 months of age. Mean age for continuing breast feeding found to be 12.5±4.6 months.

Discussion
In the current study male and female children ratio, almost the same because it was a community based study in peripheral union council. Mothers of the children were mostly between the ages of 20 to 30 years. However, the results are different from those found in communities like Australia, India and others, which the most of the women get married and gave births late. Dratva et al who worked on feeding practices and mothers character, found 68.0% mothers in the age group 30-39 years and only 27.0% were of 20-29 years (25). This shows the difference between the developing and developed world the different patterns of the age at marriage and childbearing age. Most of the participants were belonging to Hindu religion in this study and from the poor subclass.

According to this study, it is shown that almost all children were breast fed in their life. But when they started it was less than half of children started within 1 hour of life. Simmerl finding in Nepal 86.6% participants gave their child breastmilk as its first food and 47% initiated breastfeeding within half an hour of child's birth (26). The reason for late start of breast feed was found to be the cultural believes that colostrum's should be discarded for three days and then start breast feed. Data from other Asian countries show that timely initiation of breastfeeding varies from 32% in Indonesia and 46% in Timor-Leste (27).

The research study show that 83.2% children were given prelacteal feed mostly ghuttee (herbal compound) compared to other countries which is much more common in Zambia 8.9% (35), 38.8% in Ethiopia (28) in Egypt 42.7% children were given prelacteal feed. Studies from India show that 38% of children received prelacteal feeding (29) In another study done in Hyderabad it is asserted that pre-lacteal feeding of honey, Gutti, water and tea are considered important pre-lacteal food for new born babies (30). The reason is that mothers in Pakistan mostly focus on breastfeeding on priority basis than they give related things to the infants. Mean duration of the breast-feeding was 12 ±4.01SD months, minimum and maximum duration of breast-feeding were 1 months and 22 months respectively (31).

Mother education plays an important role in the child feeding that can be done in various manner. Mother education can be given while the antenatal visits. Or it can be improved through the proper training, motivation, monitoring, and strengthening of the lady health worker’s role in feeding counselling. Further, in one study conducted in Islamabad shows that literate mother (57%) and on the otherside, uneducated mothers usually initiate complementary feeding at certain age of the child which is mostly noticed that 12 months old child not given breastfeeding and started other food respectively (32,33). However, it is essential to give proper education to the women when to start nutritional food along with proper counseling that help in the growth and development of the children till their 2 years of age time period. Hence, creating mother-friendly work places is necessary where awareness should be given regarding the importance of mother breast feeding respectively.

Conclusion
It is concluded that children living in the peripheral areas, kapor union council of Umerkot district was poor and the dietary habits were not according to IYCF recommendations. In the current research study, researcher analyzed that high number of prevalence of prelacteal feeding and late initiation of breast-feeding. The researcher further identified that a large number of mothers started complementary feeding before the time recommended. It was also obvious from the data that mothers were not giving quality food to their children.

REFERENCES:


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