PAKISTAN JOURNAL OF PUBLIC HEALTH

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SUBSCRIPTION FEES
Pakistan: Annual PK Rs. 2,000
Single copy PK Rs.500
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Single copy USD 80

Indexed at
PakMediNet
www.pakmedinet.com
WHO Index Medicus for the Eastern Mediterranean Region
Pakistan Journal of Public Health 2015
Health Services Academy, Islamabad
ISSN: 2225-0891
E-ISSN: 2226-7018
www.pjph.hsa.edu.pk
ISSN: 2225-0891
E-ISSN: 2226-7018
Vol 5, No.4 (December) 2015

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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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Articles passing the initial short listing process will be subjected to a double blind review by at least 2 reviewers of renowned status in public health field, nationally and internationally. They will assess the articles on the basis of objectives, methodology, scientific rigor and conclusions drawn. Any queries generated during this process will be forwarded to the author/s for correction or revision by the journal editor/s.

When all outstanding issues in the article have been addressed/corrected, the final document will be subjected to a light edit for grammar, punctuation and language. The authors will be given up to a week to approve the final document for printing.

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Authorship of the articles can be claimed by those researchers who have made a major contribution in the study. Acceptable contribution would include, design & concept of study, data gathering, interpretation & analysis, article writing, proofing and/or corrections.

Authors would also be expected to declare any possible conflicts of interest as well as the degree of contribution to the above mentioned criteria by each of the authors of the study.

The sequence of authors once submitted will not be changed without the express consent of all authors. Furthermore, the number of authors for each study should reflect the scope of work. National level, multi site studies or those having multiple collaborating partners could have more authors than ones dealing with limited scope.

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Abstracts of original research article should be prepared with a structured format i.e. Introduction/background, objectives, methods, results and discussion/conclusion. Authors must include 4-6 key words. Review article, Case report and other require a short, unstructured abstract. Commentaries do not require abstract. Abstract should not exceed the word limit of 300 words for original articles and the total word count not more than 3000 words, excluding the abstract and references.

Introduction
This section should include the purpose of the article. The rationale for the study or observation should be summarized; only strictly pertinent references should be cited; the subject should not be extensively reviewed. Data or conclusions from the work being reported should not be presented.

Methods
This section must include the type of study, study population, study area, study duration, details of developing tools for data collection, pre-testing, data collection, plan of analysis, ethical considerations and any other detail deemed necessary to be submitted to support the researchers’ work. References to established methods should be given, including statistical methods; references and brief descriptions for methods that have been published but are not well known should be
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**Results**
These should be presented in a logical sequence in the text, tables, and illustrations. All the data in the tables or illustrations should not be repeated in the text; only important observations should be emphasized or summarized.

**Tables and figures**
Tables and figures should be kept to a minimum. Tables must be comprehensible without reference to the text. References should not be cited in the tables. Authors should indicate at approximately what point in the text the table should appear. Figures, graphs, drawings etc. should not be overly complex and must be intelligible when reduced in size for printing. They should be on separate sheets, numbered and with legends. Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

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CHILDREN EXPLOITATION THROUGH CHILD LABOUR IN DISTRICT VEHARI, PAKISTAN

Ejaz Ahmad Khan, Saleem M Rana, Aashifa Yaqoob, Anwar Rafay, Sidra Iqbal, Usman Nadeem, Jawad Saeed, Rosana E Norman

Abstract

Background: Exploitation and abusive handling of children through child labour is an important issue which has evaded the attention of global, national and local authorities. Research reveals that child labor is a common phenomenon which runs widely and deeply. This study aims to describe children exploitation through child labor in district Vehari, Pakistan.

Methods: We conducted this cross sectional study in both the rural and urban settings of the three tehsils of district Vehari, during the months of May and June 2013. A total of 542 children living in difficult circumstances employed in 11 work categories (94.1% male; average age 13 years) were interviewed using semi-structured questionnaires. Information on socio-demographic characteristics of children, health outcomes, financial exploitation and exposure to physical and sexual abuse was collected.

Results: We found that 100% of study subjects were being forced to work and financially exploited for working more than average working hours, i.e. 10.78 (±2.58) hours a day for just Rupees 1000-2500 (US$9.72-24.30) per month as wages. For physical abuse, 8.5% of children reported being subjected by the employers and the family members. However, no sexual abuse was reported. Large family size and illiteracy were found to be important predisposing factors.

Conclusion: We conclude that exploitation of underprivileged children through child labor is an issue in Vehari. This has evaded the attention of the national and local authorities though there is enough legislation in Pakistan.

Keywords: Child abuse, mistreatment, employment, developing country.

Introduction:

Exploitation and abusive handling of children through child labor has outwitted the attention of the global community and of national and local authorities, including those governing health professionals, worldwide. The International Labor Organization (ILO) defines child labor as "work that deprives children of their childhood, health (physical and mental), development, dignity and education (not attending school at all, quitting school too early or compelling them to merge heavy work and school presence)"(1). According to the ILO & the UNICEF, all work done by children and adolescents cannot be grouped under the child labor umbrella. Work that does not hinder the education, health and development of the child is called 'child work' i.e. working after school time, working during school vacations or working for the family business. Child work is not merely essential for individual development but it also aids in development of compulsory skills for the advancement of society. The demarcation between child labor and child work lies between work hours, work conditions, type of work and age of the child in the context of individual countries (2).

In Pakistan, the Employment of Children Act 1991 classifies a 'child' as an individual under the age of 14 years (3). Later in the 18th amendment (2011), this age was increased to 16 years (in accordance with the constitution) but without amending the already existing labor laws, which led to confusion in understanding implications under existing regulations. In the constitution of Pakistan, in article 25(A), it is stated that the state has to provide mandatory education between the age of five and sixteen years which reflects that the child below the age of 16 years could not work.

Children Living in Difficult Circumstances (CLDC) are defined as "children >18 years engaged in an economic activity and doing work that is unsuitable for their capacities or that may be harmful to their health,"
education or moral development”. This neglect, physical and emotional ill-treatment, and exploitation results in potential disparity to the child and is called “Child Labor”. Most of the child labor occurs in informal industries where unsafe and hazardous working conditions pose physical, chemical, biological, and psychosocial health risks, which may vary with work type, intensity, and conditions, to the child's health. Further, these children are exposed to occupational health risks, so are the adults, at the levels not suitable for their developing physical and mental structures, leading to irreversible damage (4) . In 1996, Dunford (5) reported that in mid-80’s UNICEF devised the category “children in especially difficult circumstances”, in which street children, abandoned and neglected children, orphans, children with physical and mental difficulties, working children, children living with HIV/AIDS, children of imprisoned mothers, child mothers, child drug addicts and refugee children were included (6) .

In this study, financial exploitation was defined in terms of long working hours and low monthly income of children.

Some estimates show that in South Asia, out of a total of an approximate 300 million children, aged between 5 to 14 years; 21.6 million children are victims of such labor (7). The International Labor Office (ILO) reports that 168 million children worldwide are child laborers, accounting for almost 11% of the child population, which is quite significant to highlight the magnitude of the issue (8-9) .

Asia has a large number of domestic child workers in the 10-14 years age group (10). Data from Bangladesh Dhaka slums projected that household poverty and economic instability are key determinants of children’s work; low household incomes are linked with high rates of both child income generation and housework (11-12). Data from Peru, Pakistan and Ghana, all developing countries, show that poverty is the major underlying cause of the child labor (13).

It is imperative to highlight that children being exploited and abused is a serious issue and this need to be explored for its magnitude, geographical distribution, causes and possible solution in Pakistan. We therefore conducted this study with the main objective of describing CLDCs by exploitation through child labor in district Vehari, Pakistan.

MATERIALS & METHODS

Study setting
The total area of the district Vehari is 4,364 square kilometers with a total population of 2.09 million, (84% rural and 16% urban). It has the best cultivated land, which is suitable for cotton, rice, wheat and other agricultural crops, which gives ample opportunity for employment to the residents. There are three tehsils (administrative sub-divisions) in district, Vehari, Burawala and Mailsi (Figure 1).

Figure 1: Tehsils of District Vehari

Target population
The following groups of children under the age of 16 years living in difficult circumstances were included in the study.

1. Children working as household servants/maids
2. Children on Bhatta (brick kilns)
3. Children on bus stops, working as conductors,
4. Children in restaurants,
5. Children in industries,
6. Children in sabzimandi (fresh foods & vegetables market),
7. Children picking garbage,
8. Children in unregistered Madrasahs (Religious schools),
9. Children in shops,
10. Children in Agriculture fields & Cotton picking,
11. Children working in motor/vehicle workshops,

Study design
We surveyed study area with exploratory component during the months of May and June 2013 by conducting In Depth Interviews (IDIs) and Focus Group Discussions (FGDs) with children, parents and employers. Pre-tested structured questionnaires were used. In each tehsil Key Informant Interviews were organized with all the concerned from public and private sectors to identify the location, causes, nature and consequences of child labor in their respective areas of operation. In identified areas a quantitative survey was carried out to interview the target group children by using android-mobile and collected required information.

Sample size
Sample size was calculated following the method of Stanley and David (14).

\[ a) \quad P: \text{the proportion of the children living with difficult circumstances which is assumed 0.50} \]
\[ b) \quad N: \text{the total number of children is 627125 which are 24\% of total population of Vehari (Plan estimate). if level of significant 5\%, v = 1.96} \]
\[ c) \quad d: \text{the standard errors that predict the difference estimated and true proportion.} \]
The formula of Stanley and David was used to determine the sample size for target groups:

\[ n = \frac{Z^2_{\alpha/2} \times \sigma^2 \times (1-D) \times N}{Z^2_{\alpha/2} \times \sigma^2 + \frac{Z^2_{\alpha/2} \times \sigma^2}{N} \times (1-D)} \]  

(1)

\[ n = \frac{(1.96)^2 \times 0.50 \times 0.50 \times 0.94450}{(0.81)^2 \times (0.44444) + (1.96)^2 \times 0.50 \times 0.50} \]  

(2)

\[ n \geq 400 \text{ when } d = 5\% \]  

(3)

Based on the calculation, a total number of children = 400 were required. This sample size was adequate for providing estimates at the district level but 542 children were interviewed to avoid any error during information collection.

**Sampling Methodology**

Stratified random sampling method was used to find out the subjects from the identified areas and interviewed after getting verbal and written consent. As population of tehsil Vehari was approximately double from the tehsil Mailsi and Burawala, so double samples were collected from Tehsil Vehari. Mapping was done to show the number of surveys conducted in each tehsil (Figure 2). The information was collected on socio-demographic characteristics of children, health outcomes and exposure to physical and sexual abuse.

**Data management and quality control**

The survey was carried out using mobile based applications in which GPS points were taken to map and also monitor the data collectors. The investigators were responsible for ensuring quality of data through proper online monitoring and review of data. On completion of survey, all data were transferred to SPSS version 18 for detailed analysis.

**RESULTS**

Most of the children living in difficult circumstances, worked in five groups: (1) shops, (2) motor vehicle workshops, (3) vegetable market, (4), hotels and restaurants, and (5) brick kilns. The most children were found to be working in shops (22%), and in motor/vehicle workshops (21%), followed closely by the ones working in hotels/ restaurant as helpers (18%). A lesser number was found among children working in vegetable market (9%), and children working in Bhatta/brick kilns (8%). The distribution of study subjects categorized with respect to the 11 work groups is given in Figure 3. Distribution of study subjects in three tehsils (Burawala, Vehari and Mailsi) by gender is given in Figure 4. The age distribution of subjects is shown in Figure 5, and education status of subjects is described in Figure 6. Monthly per house hold income and subject income is given in Figures 7 and 8, respectively. Large family size, low education and income appear to be important risk factors for child labour.
Figure 4: Gender Distribution of Children Living in Difficult Circumstances

Figure 5: Tehsil-wise Percent Distribution of Children

Figure 6: Tehsil-wise Educational Status of the Children

Figure 7: Tehsil-wise Monthly Household Income
The mean household size of study subjects was 7.39 ± 2.49 with 2.61 ± 1.16 earning members, having 5.28 ± 2.12 number of siblings. Data revealed that percentage of educated mothers and fathers was 13.2% and 27.9%, respectively, which is very low (Table 1). Female representation in our study was low (5.9%), due to time of study "June and July". Cotton picking season in Pakistan is November/December, so female representation was low. A high proportion (58.8%) of child laborers was aged between 11 and 15 years. Overall, monthly household income ranged between Pakistan Rupees (Pak Rs.) 5000 to 20000 (US $50 to US $200 approximately), less than half (39.9%) of the families were earning Pak Rs 5000 to 10000 (US $50 to US $100) per month. Around one-third (32.5%) of the families were earning Pak Rs 10001 to 15000 (US $100.01 to US $150) per month while fewer (19.2%) families were earning more than just Pak Rs 15000 (US $150) (Figure 7). Overall monthly income of these children ranged from Pak Rs. 1000 to 2500 (US $10 to US $25) per month. Majority of them (64.6%) earned less than Pak Rs. 2500 (US $25) /month. Children on bus stops, working as conductors/ helpers, were paid Pak Rs. 4000 (US$40) per month which was higher as compared to adults and children working in motor/vehicle workshops were getting lowest wages among all categories which was only Pak Rs. 1200 (US $12) per month (Figure 8). On an average, the children worked 10.78 ± 2.58 (+ SD) hours a day. In all groups of children, they were working more than 12 hours a day except madrassa children (religious schools). Most (72.5%) of the respondents were dissatisfied regarding payments of their wages.

Very high percentage (72.1 to 86.8) of parents was illiterate. 60.2% of the children reported that they did attend school up to primary level. Half of the children (50.4%) reported that the main reason for dropout from school was non affordability.

No significant complex health problem was found in these children as majority of children reported being sick on a few occasions or very often during the past year. Most (85%) did not have a birth certificate with them.

Regarding the probing into the sexual and physical abuse, a few (8.3%) of the participants reported having been abused physically by employers and family members. Physical abuse was slightly higher in children working in sabzimandi (fruits & vegetable market) (13.46%) and motor/vehicle workshops (12.93%) (Table 1). No one reported sexual abuse.

### Table 1: Characteristics of Children in District Vehari, the Punjab, Pakistan

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<th>Total Study subjects in number+ 542</th>
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<td></td>
<td>Mean ± SD</td>
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<tr>
<td>Total Family Members</td>
<td>7.39 ± 2.49</td>
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<tr>
<td>Total Earning members</td>
<td>2.61 ± 1.16</td>
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<tr>
<td>Number of siblings</td>
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<table>
<thead>
<tr>
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<th>Percentage (%)</th>
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<td>Female</td>
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<tr>
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<tr>
<td>6 – 10</td>
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<tr>
<td>11 – 15</td>
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<td>16 – 18</td>
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<td><strong>Income of the family (Rs)</strong></td>
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<td>Percentage receiving same wage as adults for same job</td>
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</tbody>
</table>

### Education

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
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<tbody>
<tr>
<td>Illiterate</td>
<td>86.8</td>
</tr>
<tr>
<td>Primary</td>
<td>9.2</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.9</td>
</tr>
<tr>
<td>Matric</td>
<td>1.5</td>
</tr>
<tr>
<td>Above</td>
<td>1.5</td>
</tr>
</tbody>
</table>

### Occupation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Housewife</td>
<td>86.4</td>
</tr>
<tr>
<td>Working/on Job</td>
<td>10.2</td>
</tr>
<tr>
<td>Not alive</td>
<td>3.4</td>
</tr>
</tbody>
</table>
Most of the children started work just before their 11th birthday. More than one third (37.1%) began working within the last 12 months, about a quarter (25.5%) of the children were working for one to two years, and a little less (18%) of this worked for two to five years. Almost same percentage of the children (19.4%) were earning for more than five years. Larger family size compelled the parents to earn more so they put their children on work.

It appeared that to earn more, parents tried make their family size larger, and to have more children who could contribute to overall household income. The present study seems to indicate that female children are not in difficulties as compared to male children; traditionally females were less exposed to child labor as they are usually involved only in cotton picking. Children working in brick kilns had a more hazardous environment than other industries; main hazard was heat vibes coming from kilns. Landfills were normally considered as viral hazards for garbage pickers. Children go into landfills without any safety measures which expose them to infections. Children working in workshops were more exposed to diseases such as muscle fatigue and accidental injuries because of physical work.

### Discussion:
Parents' education level, household income and family size influenced children's involvement in labor. There is enough evidence that education of mother has a role in child care, and possibly keeping him out of difficult circumstances (15). Income of the family also has some effect in pushing the child into the labor market. Nonetheless, in addition to this, the literature also highlights the pull factors of unavailability of enough low-paid laborers in the market pulling the vulnerable children into the labor market (16). A large family size, coupled with poverty, and with younger brothers and sisters being dependent, increases the chances of the elder sibling to drop into the child labor (17). Nonetheless, there is some evidence on how the children work in difficult times to support their families in financial crises (18).

In the country's context, both the constitution and Labour laws of Pakistan prohibit the employment of children under the age of 14 years. However, ILO and UNICEF differentiate between child labour and child work. Accordingly all work done by children can't be classified as child labour. So therefore it is differentiated that if work is not affecting the health and personal development as well as schooling of children, then this type of work cannot be taken negatively and does not fall in the category of child labour, e.g. assisting in family business or working during school holidays or after school hours. These activities are not "child labour", rather these can be termed as "child work". Child work is not only beneficial for personal development of children; it also provides them necessary skills to be useful and productive members of a society. In Pakistan in accordance with part III and section 7 of the Employment of Children Act 1991, a child or adolescent cannot work more than 7 hours a day (it includes one hour of rest, so essentially six hours of work). A child can't be permitted to work between 07.00 pm to 08.00 am. Moreover, a child cannot be required or permitted to work overtime. In the light of this act all children surveyed in this study were being forced to work more than average working hours, i.e. 10.78 (+ 2.58) hours a day for only Rs. 1000-2500 (US $9.72-24.30) per month and were being financially exploited. More than 70% of children were earning less than adults were being paid for the same job. This financial exploitation has adverse impacts on the health, well-being and schooling of children. All children found were employed illegally and informally, to support their families financially and to obtain food, clothing and shelter. Hence they were not enrolled in schools and devoid of their rights for education.

The main limitations of this study were that it was not a household survey so the prevalence of "children" working in the study areas was not determined. As data collection was carried out in May and June, so girls employed in cotton picking were not included due to the off-season for cotton. In addition, only children in unregistered madrassahs (Religious schools) were
interviewed, as the basic needs and education were being provided to children of registered madrassahs.

The reason why this study was focused on children living in difficult circumstances instead of "all children on work" was to explore the special circumstances of exploitation in this particularly disadvantaged group of children.

This work has important policy implications for the government of Pakistan. In Pakistan, a number of laws contain provisions prohibiting child labor and regulating the working conditions of child and adolescent workers.

As the following groups of children under the age of 16 years were included in the study,

1. Children working as household servants/maids
2. Children on Bhatta (brick kilns)
3. Children on bus stops, working as conductors,
4. Children in restaurants,
5. Children in industries,
6. Children in sabzimandi (fresh foods & vegetables market),
7. Children picking garbage,
8. Children in unregistered Madrasahs (Religious schools),
9. Children in shops,
10. Children in Agriculture fields & Cotton picking,
11. Children working in motor/vehicle workshops,

Under section 4 of the Employment of Children Act 1991, the Federal Government notified the four occupations and 34 processes where children's employment is prohibited, almost all categories studied falls under the mentioned section of Act.

It is one of the major problems in Pakistan; therefore efforts have been made to limit child work and indentured servitude by making laws. However, those laws are universally ignored, and children are working in all occupations and processes and sacrificing their rights to education and health.

On in-depth perusal of the act "The employment of Children Act, 1991 with amendment Act 2011", found that all nomenclatures have been defined in part I (2), prohibition of employment of children in certain occupation and processes explained in part II (3) and regulation of conditions of work discussed in part III (7) 1 to 6, (8 to 13) and miscellaneous issues have been given in part IV (14 to 21). Act is sound and comprehensive and needs implementation in letter and spirit.

All these laws were being universally ignored and children were working, therefore integrated approach to eliminate child work is required. For elimination of child work and provision of education, skill training, and income-generation schemes need to be started in the area.

Provision of free basic education & health to each child is a key strategy to combat this menace, parent's income-generation schemes could facilitate to send the children to school. Adult education programmes would be helpful to reduce the problem by educating the parents. The present system of family planning is not helping to achieve fruitful results as family size of every respondent is more 7.39 (± 2.49). Along with these measures, enforcement of labor laws is essential. But legislative sanction like banning child work cannot be a final solution it could have opportunity cost for society, but efficient action plans regarding policy could reduce this issue in this area. Efficient job market creating employment opportunities especially for poor parents is lacking.

Considering the need to adopt new instruments for the prohibition and elimination of child work, as the main priority for national and international action, requires an immediate and comprehensive plan for free basic education. There is a need to remove children from all such work; rehabilitate them by addressing their needs and the needs of their families. Child work is caused by poverty and the long-term solution lies in sustained economic growth, leading to social progress by poverty alleviation and universal education & health schemes. Comprehensive scholarship schemes for these children for their schooling through Government Bait-ul-Mal (donations for needy) department, NGOs and Civil Society partnership could improve the situation.

We certainly need a vision of respectful child care that would be meaningful for all children and care providers everywhere. But when exploitation and abuse is due to locally expressed power dynamics that conspire against both children and care providers-then the real work of improving quality and creating accountability would be required.

Conclusion:
We conclude that exploitation of underprivileged children through child labor is an issue in Vehari. This has evaded the attention of the national and local authorities though there is enough legislation in Pakistan

Funding:
This work was supported by the PLAN Pakistan vide award number Nil dated 08-05-2013

Acknowledgements:
The authors would like to thank very sincerely to Plan Pakistan who supported this study and all those who contributed to the production of this manuscript. The field staff and volunteers in study areas worked very hard to make this study successful. We had a wonderful time in study area. A very special word of thanks is due to all the children and community members who gave their time to meet with us. We know that through our brief visits to each locality we only scratched the surface of
things. However, we gained vital insights from our meetings and often returned back to our hotel humbled by and in respect of the courage and resilience of the children and community members in the face of the difficulties that they face.

Certified that ethical rules were observed properly, study was conducted after taking their consent and all information was kept confidential.

Conflict Of Interest:
Certified that there is no conflict of interest

References:
PATTERNS AND CAUSES OF ACCIDENTS AND INJURIES AMONG ISLAMABAD ELECTRIC SUPPLY COMPANY WORKERS

Mohammad Tahir Kazi¹, Sana Iqbal¹, Syed Abid Hussain Shah¹, Hira Ejaz¹, Iqbal Ahmad Khan¹

¹Public Health Sciences, Sarhad University Islamabad Campus, Corresponding Author: Mohammad Tahir Kazi
Email: drkazi1501@yahoo.com

Abstract

Background: Since the invention of electricity and electrification in the USA in 1890s, there had been heavy loss of human lives working as line staff, approximately one in two in early phases. Islamabad Electric Supply Company (IESCO), one of the seven electrical companies created after bifurcation of WAPDA, is no exception in occurrence of such accidents with almost ten fatal accidents per year and hundred deaths of line staff workers in a year country wide. It is, thus, to critically analyze patterns of accidents and ascertain their causes.

Material & Methods: This was a cross sectional study conducted among IESCO employees of line staff. Total of 200 participants were included in the study. A structured questionnaire was developed which was filled by the participants. Data entry and analysis was done by using Statistical Software, SPSS 17.

Results: In previous ten years 100 fatal and 96 non-fatal accidents occurred in IESCO. There are about 13000 workers in IESCO at present. Majority of workers died due to head injuries and burns due to electrocution (29 due head injuries and 42 due to electrocution). 57% of the respondents consider overconfidence and defective Personal Protective Measures (PPM) as major cause of accidents. 69% of respondents consider non-adherence to SOP as cause of these accidents.

Conclusions: There are many causes that contribute towards occurrence of accidents in most of cases. A narrow majority of respondents are not satisfied with the safety standards and their implementation level. Among the leading causes of accidents are: not following protocol of work, over confidence, defective and incomplete PPM and over work.

Key Words: Prevalence, pattern, accidents, injuries, safety, burns, electrocution, workers.

Introduction:
Between 1890s and the 1930s, transmission and distribution line work was considered one of the most hazardous jobs. Approximately 1 in 2 linemen were killed on the job, mostly from electrocution (1). In many countries, occupational accidents have impaired the health and safety of workers in various professions. In 1998, France reported 1.35 million occupational accidents among 14.5 million workers. (2,3) resulting in social and economic problems, disabilities, and loss of work time, increased healthcare costs, and other adverse consequences. (4-8) According to the International Labor Organization (ILO), there are more than 15 million work-related accidents annually on a worldwide basis, and about one million people die each year due to occupational accidents (9).

The mean rate of fatal occupational accidents in the world is 14 such accidents per 100,000 workers, with Europe reporting 5.89 fatal accidents per 100,000 workers (10), and the U.S. reporting 3.2 fatal accidents per 100,000 workers (11). However, according to the Bureau of Labor Statistics in Iran, 43% of accidents are accompanied with injuries (12). According to statistics released by the Social Security Organization in Iran in 2003, 268 people died in 14,114 accidents that occurred at the workshops (13). Accordingly, a study in Semnan between 2002 and 2006, the rate of occurrence of fatal accidents or other injuries at work was reported to be 3.8 per 100,000 workers (14).

Electrical burns account for a significant portion of accidents that lead to death. It has been reported that 42% of events that led to death were due to work-related electrocutions and contact with electrical lines between 1992 and 2002 (14). Pakistan is not exempt from this trend and each year about 100 workers die in electrical companies of Pakistan. (15)

IESCO was formed in 1998 to take over the assets, functions and responsibilities of Islamabad Area Electricity Board which was then a division of WAPDA. (15)
There is a well-established safety directorate in IESCO headed by a senior officer with relevant staff. Safety manual is also published mentioning safety laws, aims, methods and purposes. These are derived from WAPDA (Water and Power Development Authority), the parent organization of IESCO. Safety measures are widely publicized through booklets, posters, danger signs and induction training. "Safety standards" are module of training of linemen after induction, managed at regional training center Islamabad (RTC). It is, thus, to critically analyze the safety measures adopted, their implementation methods and monitoring and evaluation.

Material & Methods:
This was a cross sectional study conducted among IESCO employees of line staff. Total of 200 participants were included in the study. A structured questionnaire was developed which was filled by the participants. Data entry and analysis was done by using Statistical Software SPSS 17. Informed written consent had been taken from respondents. Consent and permission from the institutional authority were taken before data collection. Confidentiality of data was ensured. Concerned ethical committee had given clearance before study was started.

Results:
Table 1: Working experience of respondents

<table>
<thead>
<tr>
<th>Total work experience in years</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 15</td>
<td>92</td>
<td>46</td>
</tr>
<tr>
<td>16 – 30</td>
<td>74</td>
<td>37</td>
</tr>
<tr>
<td>31 and more</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Respondents experience shows less or equal to 15 years is 46%, between 15-30 years is 37%, more than 30 years is 17%. Overall, as it can be observed, the response given is mostly by experience staff.

Table 2: Designation wise distribution of respondents

<table>
<thead>
<tr>
<th>Designation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM 1</td>
<td>68</td>
<td>34</td>
</tr>
<tr>
<td>LM 2</td>
<td>31</td>
<td>15.5</td>
</tr>
<tr>
<td>LS 1</td>
<td>9</td>
<td>4.5</td>
</tr>
<tr>
<td>LS 2</td>
<td>43</td>
<td>21.5</td>
</tr>
<tr>
<td>ALM</td>
<td>49</td>
<td>24.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

LM - Line Man
LS - Line Superintendent
ALM - Assistant Line Man

As can be observed, the line men, the practically working force, makes the bulk of respondents followed by supervisors.

Figure 1: Year wise data of injuries / deaths
Common Injuries: Most common injuries are head and spine injuries, burns and fractures.

Table 3: Level of satisfaction about IESCO Safety measures availability

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Good</td>
<td>89</td>
<td>44.5</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>97</td>
<td>48.5</td>
</tr>
<tr>
<td>Not satisfactory</td>
<td>13</td>
<td>6.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

As it is observed that level of satisfaction of only one respondent is excellent, i.e. 0.5 % of the total respondents, while for 97 (46%) level of satisfaction is just satisfactory and for 89 (42.2%) level of satisfaction is good. It shows that majority of worker’s level of satisfaction fall in the area of good and satisfactory.
Table 4: Level of Implementation of IESCO safety measures

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Good</td>
<td>57</td>
<td>28.5</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>97</td>
<td>48.5</td>
</tr>
<tr>
<td>Non satisfactory</td>
<td>44</td>
<td>22.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

As can be seen, only one respondent (0.5%) agrees with the excellent level of implementation of safety measures, 97 (46%) agree with satisfactory level and 57 (27%) with good level of implementation of safety measures. On the other hand, a significant percentage i.e. 44 (20.9%) are not satisfied with the level of implementation of safety measures. It points towards a very important clue that, the facilities for safety do exist, but not fully implemented, which seems to be a shortcoming both on part of workers and supervisors.

Table 5: Over confidence as the cause of accidents

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>79</td>
<td>39.5</td>
</tr>
<tr>
<td>Yes</td>
<td>121</td>
<td>60.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

121 (57%) of the respondents believe that overconfidence on part of workers is cause of accidents while 79 (37.4%) do not think so.

Table 6: Defective/incomplete PPM

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>87</td>
<td>43.5</td>
</tr>
<tr>
<td>Yes</td>
<td>113</td>
<td>56.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

113 (53.6%) of the respondents think that defective/incomplete PPM is the cause of accidents while 87 (41.2%) do not agree. It means that, though the safety system does exist but is defective/incomplete, contributing to the accidents.

Untrained/non-qualified staff: 166 respondents (78.7%), a good majority, believe that lack of training or non-qualified staff is not the cause of accidents while 34 (16.1%) agree that untrained/non-qualified staff is the contributory cause of accidents.

107 (50.7%) respondents believe that overwork is one of the causes of accidents while 93 (44.1%) do not think that overwork is the cause.

Table 7: Over work

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>93</td>
<td>46.5</td>
</tr>
<tr>
<td>Yes</td>
<td>107</td>
<td>53.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

137 (64.9%) of respondents agree that not following the protocol of work is the contributory cause of accidents, while 63 (29.9%) do not agree as not following the protocol of work is the cause of accident. This observation is in line with our previous conclusions, as most of the times, it is not the lack of equipment (PPE), rather it is the implementation and following of protocol of work which is the issue.

Under compensation: An overwhelming majority, 190 (90%) of the respondents, do not think that it is a contributory factor, while only 10 (4.7%) think so.

Ignorance: 108 (51.2%) of the respondents, do not think that it is a contributory factor, while 92 (43.6%) do think ignorance to be a contributory factor.

If we take training and ignorance about work as opposite phenomenon, then there appears to be discrepancy in our one of previous questions regarding training to which good/satisfactory response was shown while the opinion regarding ignorance is almost split. One of the possible reasons is illegal work by non-qualified workers.
which is not an uncommon occurrence. Negligence: 111 (52.6%) of respondents are of the opinion that negligence is one of the contributory factors while 89 (42.2%) do not agree with it. It seems to be a logical observation which is in line with most of our previous findings.

Unavoidable causes: A big majority i.e. 192 (91%) of the respondents do not consider that the accidents are unavoidable while only 8 (3.8%) think so. It is exactly in accordance with the international standards stating that most of the accidents world over are avoidable.

Table 8: Reasons of accidents in IESCO

<table>
<thead>
<tr>
<th>Causes</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not adhering to SOP</td>
<td>137</td>
<td>68.5</td>
</tr>
<tr>
<td>Over confidence</td>
<td>121</td>
<td>60.5</td>
</tr>
<tr>
<td>Defective PPE</td>
<td>113</td>
<td>56.5</td>
</tr>
<tr>
<td>Negligence</td>
<td>111</td>
<td>55.5</td>
</tr>
<tr>
<td>Over worked lethargy</td>
<td>107</td>
<td>53.5</td>
</tr>
</tbody>
</table>

Overall perceptions about causes of accidents are shown in above table in decreasing order. 137, (68.5%), of the respondents, the most frequent response, believe that non-adherence to SOP is a reason of accidents. 121, (60.5%) consider over confidence to be the cause of accidents. 113, (56.5%) think defective/incomplete PPE as contributory factor. Negligence on the part of workers is considered as reason of accident by 111(55.5%) and 107 (53.5%) hold that over worked lethargy is a cause of accidents.

Discussion
By looking at the table of yearly fatal and non-fatal accidents, it is observed that, inspite of all safety measures adopted, there is slight increase, both in fatal and non-fatal accidents over the past 10 years.

However, it is also argued that the slight increase in accidents is due to gradual increase in number of consumers over past 10 years, with no corresponding increase in workforce, leading to overwork lethargy and hence increased accidents.

As observed, the level of satisfaction of only one respondent is excellent, i.e. 0.5% of the total respondents, while for a high number of respondents, 46%, the level of satisfaction is just satisfactory and for 42.2% level of satisfaction is good. It shows that majority of worker's level of satisfaction fall in the area of good and satisfactory. One reason of non-reduction or even increase in accidents is that about more than 50% of the respondents do not consider the safety measures as good as to reduce the number of accidents.

As can be seen, only one respondent (0.5%) agrees with the excellent level of implementation of safety measures, 46% agree with satisfactory level and 27% with good level of implementation of safety measures. On the other hand, a significant percentage, i.e. 20.9% is not satisfied with the level of implementation of safety measures. It points towards a very important clue that, though the facilities for safety do exist, these are not fully implemented, which seems to be a shortcoming both on part of workers and supervisors. Again, it can be said that, if the level of implementation of safety measures was considered to be good or excellent by majority of the respondents, which is not the case in our study findings, the accident would have been controlled.

57% of the respondents believe that overconfidence on part of workers is cause of accidents while 37.4% do not think so. It appears that overconfidence comes as a barrier in following protocols of safety resulting in high number of accidents.

53.6% think that defective/incomplete PPM is the cause of accidents while 41.2% do not agree. It means that, though the safety system does exist, it is defective/incomplete and, thus, contributing to the accidents. It is the opinion of more than 50% respondents that the PPM are either deficient or defective leading to accidents which can be prevented by improving PPMs. 78.7%, a good majority, believes that lack of training or non-qualified staff is not the cause of accidents while 16.1% agrees that untrained/non-qualified staff is the contributory cause of accidents. Inspite of observed fact that a good majority are satisfied with the standard of safety training, accidents are still occurring. By this observation, one possible conclusion made could be the common occurrence of work by untrained/unauthorized workers illegally.

50.7% believe that overwork is one of the causes of accidents while 44.1% do not think that overwork is the cause. It is congruent with our initial observation of high workload because of increased number of consumers with no corresponding increase in number of trained workers.

64.9% of respondents agree that not following the protocol of work is the contributory cause of accidents, while 29.9% do not agree as not following the protocol of work is the cause of accidents. This finding differs significantly from the official version found out in reviews that 90% of accidents occur due to not following the protocol of work. However this observation is in line with our previous conclusions, as most of times, it is not the lack of equipment (PPM), rather it is the non-implementation and following of protocol of work which is the issue that leads to accidents.

51.2% do not think ignorance to be a
contributory factor while 43.6% do think ignorance to be a contributory factor. If we take training and ignorance about work as opposite phenomenon, then, there appears to be discrepancy in our one of previous questions regarding training to which good/satisfactory response was shown while the opinion regarding ignorance is almost split. One of the possible reasons is illegal work by non-qualified workers which is not an uncommon occurrence.

52.6% of respondents are of the opinion that negligence is one of the contributory factors while 42.2% do not agree with it. It seems to be a logical observation which is in line with most of our previous findings. Under compensation is not considered to be contributory cause to accidents. While comparing results of this study with reviews, it is observed that the causes/factors responsible for accidents do not differ much, both at national and international level.

The official version of causes of accidents of 90% due to not following of protocol does not tally with our findings which are about 65%. The reason could be factors other than this, such as lack of supervision, deficient training and unauthorized work.

As per findings of Health and Safety Executive (HSE), the factors/causes mentioned are unsafe working conditions, no training, inadequate information, failure to manage work and poor work control in that order. The findings do not differ from ours except the low incidence and difference in contributions of causal factors. (16)

The USAID study most important conclusion is non-Permission To Work (PTW) as to be major cause of accidents. (17) Non PTW falls under non-following of protocols of work and as such supports the fact that non-following protocols give rise to other errors that leads to accidents. Its other conclusions, such as non-use of PPE as contributory cause, are in congruence with our study findings.

Conclusion
Finding of this study indicate that the causes/ factors contributing to accidents in line staff workers are usually multiple rather than a single cause. In fact it is like a "problem tree" where cause of accident has its own cause and so on. However, it appears that there is lack, not only of responsible duty sense, but also lack of moral responsibility which cannot be judged by rules and regulations. When we track down the cause of causes we reach to the conclusion that there is lack of commitment and consciousness of value of human life at the national level. This is something not to be controlled by laws; rather it needs a change of national culture and a sensitization towards dignity of human life. As such, there is need to bring improvement, not only in safety measures, but an appeal made for the sanctity of human life, resulting miseries of the families, permanent handicaps and loss of skilled workers as well as financial losses to the company and nation.

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PATTERN OF PATIENT'S FAMILY COMPLAINTS IN CHILDREN WARD OF A TERTIARY CARE HOSPITAL OF RAWALPINDI

Hira Ejaz, Sana Iqbal, Dr. Fatima Iqbal, Iqbal Ahmad Khan

1 Sarhad University Islamabad Campus, 2 MIHS, Rawalpindi, Corresponding author: Prof. Iqbal Ahmed Khan Dean Public Health Sciences, Sarhad University Islamabad Campus. Email: prof_iqbalkhakwani@hotmail.com

Abstract

Background: Patient complaints are increasingly recognized as a potentially valuable source of information to improve quality of care in the hospital settings. The complaints reported by the patient's relatives could be used more effectively in health care settings when working with quality improvement. The measurement of patients and their family satisfaction can provide a dependent measure of service quality and also serves as a predictor of health related behavior.

Objective: To study the complaints related to the management of cases, communication process, and environmental conditions of the hospital.

Methodology: Data was collected through a self designed mixed questionnaire in English language from 200 respondents. Out of 200 respondents, 118 (59%) were entitled and 82 (41%) were Civil Non entitle (CNE). Convenient sampling method was used. Questionnaire was administered on those patients and their family members who were admitted in hospital since past three days at least.

Results: Almost all respondents were satisfied with the medical and nursing care provided in the hospital; majority was satisfied with the indoor services like diagnostics, imaging, laboratory, and pharmacy services. 87% were found satisfied with their reception in the ward, 92% were satisfied with the behavior of nurses, 82% were satisfied with the dealing of paramedical staff, 96% were satisfied with the medical and nursing care provided in the ward. Major dissatisfies were poor shuttle service, cumbersome admission procedure of the hospital (40%), poor quality of food (70%) and poor hygienic condition of the toilets (72%).

Conclusion: The major satisfiers were behavioral and professional attitude of doctors / nurses, and medical / nursing care provided in the hospital. Major dissatisfies were cumbersome admission procedure of the hospital, poor shuttle service for the patients and their families, cleanliness of toilets, quality of food served in the hospital.

Key words: Patients, family complaints, tertiary care hospital.

Introduction

Patient satisfaction is one of the critical issues for healthcare providers. Health care organizations are working in a competitive environment. In these days hospital needs to enhance the level of satisfaction if they want to remain in the competition with other hospitals. Patient satisfaction is basically satisfying patients' expectations and understanding their needs. Patients' feedback can affect the overall quality of care, and also serves as a predictor of health related behaviors. (1).

Patient satisfaction is gaining importance in health care provision all over the world. Outcomes assessed from the patient's perspective have been accepted as valid, important, standard indicators to assess the quality of care in health care settings (2).

Patient's complaints have been identified as a valuable source for monitoring and improving patient's safety. Patients are sensitive to, and able to recognize, a range of problems in health care delivery, some of which are not identified by traditional system of health care monitoring (e.g., incident reporting system, retrospective case reviews) (3).

Patient complaints are increasingly recognized as a potentially valuable source of information to improve quality of care in the hospital settings (4).

Analyzing the data on patients and family experiences strengthen the ability of health care organization to detect systematic problems in care. Complaint data can also be used to identify safety and quality issues within health care systems or conditions (e.g. management problems) (5).

Capturing patient feedback about health care provides insight into the extent to which patient expectations of care have been attained. Understanding the current experience of patients also needs to be considered central to driving quality improvement in
health care. Internationally patient surveys highlight key areas for improvement that is: communication with health care professionals, teamwork by staff, and responsiveness by staff and involvement of patient and family. Many studies indicate that hospitals that perform well on patient care experience surveys also do better on clinical metrics (6).

Total quality management (TQM) cannot be effectively utilized as a competitive weapon unless quality can be accurately defined, measured, evaluated, and monitored over time. Through such analysis a hospital can elect how to expend its limited resources toward those quality improvement projects which will impact customer perceptions of service quality the most (7).

Methodology
This descriptive study was carried out at Combined Military Hospital, Rawalpindi. Study population comprised of 200 admitted patients and their family members in the children ward of the hospital from 15th April to 15th June 2015.

In this study the questionnaire was administered on those patients and their family members who were admitted in hospital since past three days at least. Patient admitted in the hospital were of two categories, first was entitled and the second was CNE (civil not entitled). Out of 200 respondents, 118 (59%) were entitled and 82 (41%) were CNE.

Study was conducted after approval from the Hospital Ethical Committee and all data was collected after the informed consent of respondents. Convenient sampling technique was used. Data was collected by interviewing the respondents and by using self structured questionnaire. The questionnaire was pretested and necessary changes were made.

The variables used to collect data were: demographic profile, satisfaction of the respondents with the hospital reception, ward reception, admission procedure, and waiting time, communication of the medical, nursing and paramedical team, hospital services, food and hygienic condition of the hospital wards.

Data was cleaned and analyzed using SPSS 17.

Results
Patient admitted in the hospital were of two categories, first was entitled and the second was CNE (civil not entitled). Out of 200 respondents, 118 (59%) were entitled and 82 (41%) were CNE.

Table 1: Hospital admission status of the respondents

<table>
<thead>
<tr>
<th>Hospital admission status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entitled</td>
<td>118</td>
<td>59%</td>
</tr>
<tr>
<td>CNE</td>
<td>82</td>
<td>41%</td>
</tr>
<tr>
<td>Total</td>
<td>n = 200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Education status of respondents was categorized as under metric, metric, intermediate, graduate, and postgraduate. Majority of the respondents 78 (39%) were graduates, 34 (17%) were intermediates, 34 (17%) were metric, 32 (16%) were under metric and 22 (11%) respondents were post graduates.

Table 2: Educational status of respondents

<table>
<thead>
<tr>
<th>Educational status</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under metric</td>
<td>32</td>
<td>16%</td>
</tr>
<tr>
<td>Metric</td>
<td>34</td>
<td>17%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>34</td>
<td>17%</td>
</tr>
<tr>
<td>Graduates</td>
<td>78</td>
<td>39%</td>
</tr>
<tr>
<td>Post graduates</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>n = 200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Out of 200 respondents, 186 (93%) were highly satisfied with the medical examination conducted by the doctor at the time of admission.

Figure 1: Complete medical examination was carried out on admission

188 (94%) respondents agreed that doctor has provided them adequate information about the patient's disease, its prognosis and management. 192 (96%) respondents agreed that doctor / treating physician has listened all of their presenting complaints patiently.

53% respondents were strongly agreed that cases were diagnosed and managed appropriately, 36% were agreed and 9% were neutral about it.
Figure 2: Case was diagnosed and appropriately managed

Out of 200 respondents 80 (40%) respondents were not satisfied with the admission procedure and reported that they faced difficulty when going through the admission procedure of hospital, among unsatisfied respondents majority were CNEs.

Figure 3: Opinion about the difficulty faced with hospital admission

Majority of respondents 174 (87%) were found satisfied with their reception in the hospital ward. All respondents were found satisfied with the medical and nursing care provided in the hospital, Almost all of the respondents 192 (96%) were satisfied with the medical and nursing care provided in the wards while their stay in the hospital.

Majority of respondents were satisfied with the behavior and dealing of Doctors and Nurses 86% respondents were agreed on that the conduct of doctors and nurses was professional 184 (92%) were satisfied with the behavior of nurses in the ward and 164 (82 %) were satisfied with the dealing of paramedical staff of the wards, respondents were relatively less satisfied in this area of communication and needs improvement in the behavior of paramedical staff.

Almost all respondents agreed that they have received moral support by the hospital staff but some complaints about the behavior of paramedical staff were highlighted by the respondents.

Majority was satisfied with the indoor services provided in the hospital; like diagnostics, imaging, laboratory, and pharmacy services of the hospital. But Respondents found shuttle service of the hospital unsatisfactory; they reported that availability of the ambulance is difficult and they had to wait for it.

Majority of the respondents were not satisfied with the food served in the hospital. Same was with the general cleanliness of the ward and its toilets.

Quality of the food served for the patients in the hospital was highly unsatisfactory, 70% respondents were found dissatisfied with the quality of food.

Table 3: Quality of food served in the hospital was good

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agreed</td>
<td>8</td>
<td>4%</td>
</tr>
<tr>
<td>Agreed</td>
<td>52</td>
<td>26%</td>
</tr>
<tr>
<td>Neutral</td>
<td>98</td>
<td>49%</td>
</tr>
<tr>
<td>Disagreed</td>
<td>28</td>
<td>14%</td>
</tr>
<tr>
<td>Strongly disagreed</td>
<td>14</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>n = 200</td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Cleanliness and hygiene of the toilets was also found unsatisfactory 72% respondents were dissatisfied with the cleanliness of the toilets.

Figure 4: Standard of hygiene / cleanliness of the ward / toilets was satisfactory

Discussion

The present study attempted to assess the satisfaction of the patients with various aspects of health care in a tertiary care hospital of Rawalpindi. The results of the study indicate that most of the respondents were satisfied with the services they received. Very few similar studies have been done in this aspect in Pakistan
and therefore we lack the data for comparison. Yet, the findings of the survey are quite helpful if they are transformed into actions for improving the quality of health care. However, the high satisfaction must be put into the context of the tertiary care centre, being a referral hospital, which receives patients who have often being shunted around between lower health facilities and attended by auxiliaries and general practitioners.

Patient's satisfaction surveys have many purposes, but more significant reasons to do so are following, such interviews help to evaluate health care services from the patient's point of view, facilitate to identify the problem areas and help to generate ideas to intervene these problems. Despite a pretty good level of patient satisfaction, a small proportion of patients expressed dissatisfaction. When patients expressed dissatisfaction with the services it indicates that hospital administration needs to do more in the drive towards improving services. The overall satisfaction of patients with services received from this tertiary care institute Came Out As Following: Respondents were highly satisfied about their interaction with doctors 93% were satisfied and agreed that their doctors checked them with concentration and care, 96% were agreed that doctor has listened all of their presenting complaints. A similar study has been conducted in Karachi where 67% respondents agreed that their doctors checked them with concentration and care (8).

In our study 94% respondents were agreed that doctor has provided proper information about the patient's health problem prognosis and its management. This is similar with the study conducted in India where 92% were satisfied with explanation about disease and treatment by the doctor (9).

It was observed that patients had faced difficulty with the admission procedure of the hospital 60% were satisfied and 40% were not, similar to the study in India 82% people were satisfied with the service at the admission counter (9).

Almost all of the respondents 96% were satisfied with the medical and nursing care provided in the wards while their stay in the hospital, similarly Agrwal and Gargs in India found 88% patients satisfied with treatment and medical care they had received in the hospital (10).

In our study 92% were satisfied with the behavior of nurses, 82% were satisfied with the dealing of paramedical staff of the wards, another study carried out by Qadri et.al found that, The behavior of nurses, doctors and orderlies satisfied 92%, 92% and 83% of people, respectively (11).

Quite good number of the respondents were satisfied with the various components of nursing services like availability of nursing personnel, nursing care and drug dispensing to the patients, which the other study revealed that majority of the patients were satisfied with the care and explanation about the disease and treatment given to them by the nursing staff. However, only 40 per cent of the patients were satisfied with the friendliness component of the nursing services (12).

Majority of respondents were satisfied with the behavior and dealing of Doctors and Nurses 86% respondents were agreed on that the conduct of doctors and nurses was professional.

Delay in the investigations, diagnosis and treatment was observed 52% respondents were dissatisfied with the case management, Qadri et.al also reported in their study that 89% respondents were satisfied with the diagnosis of health problem and management of patient in the hospital but 11% were not satisfied that's why the area of case management of the patient needs some improvement, level of dissatisfaction in our study is very high and needs some interventions in this aspect (11).

Cleanliness and hygiene of the toilets was also found unsatisfactory by 72% respondents were dissatisfied with the cleanliness of the toilets. Qadri et.al reported that 35.5% of the respondents were dissatisfied by the toilet facilities in the hospital building and the similar results were found in a study by Srilata (13), and Persak et al. 2004 (14), who showed lowest level of satisfaction regarding toilets 3.52%. In another study by Aleena et.al reported a higher level of dissatisfaction 80% (15), in another study cleanliness of bed, toilet and ward are major issues to provide satisfaction among patients. 86.8 per cent, 70.4 per cent and 84.9 per cent of the patients were satisfied with the cleanliness of the bed, toilet and ward respectively whereas 12.5 per cent, 29.6 per cent and 15.1 per cent of the patients respectively were not satisfied (16).

Our study shows a high level of dissatisfaction 70% regarding food facilities, the results of which were also found to be very low with a study by Aleena et al 18% (17). This could be explainable by the fact that increasing modern era demands and awareness of the health care seekers push the medical care providers to deliver quality medical care in package with quality hospitality and related facilities to solace them.

Respondents found shuttle service of the hospital unsatisfactory; they reported that availability of the ambulance is difficult and they had to wait for it, sometimes they have to arrange the transfer of their patient in different departments like X-ray, laboratory or ultrasound departments by themselves.

In our study data collected revealed that colour coded waste bins for the disposal of infectious and non infectious items were not available for the patients in the ward. Studies from other developing countries are also consistent in that there was no concern among hospital staff about segregation of waste into different groups for proper disposal. One such study reported that waste was inappropriately stored and processed for disposal in all the hospitals surveyed. Other studies from
Pakistan reveal similar situation in major hospitals of the country. One study reported that most of the hospitals did not have infection control and waste management teams in place. Also only half of the hospitals had temporary and central storage areas (18).

**Conclusion**

In the light of study conducted, the major satisﬁers for patients and their families were behavior and professional attitude of doctors / nurses, and medical / nursing care provided in the hospital. Major dissatisfies were admission procedure of the hospital, shuttle service for the patients and their families, behavior of orderlies and sanitary attendants, quality of food served in the hospital.

**Recommendations**

1. Policies for admission and discharge procedure at administrative level should be users friendly and client oriented.
2. Shuttle service and ambulances for transport of patients to various departments be increased keeping in view increased inﬂux of patients in the hospital.
3. The food to be served to various categories of the patients should be prepared with the consultation of clinicians as well as the hospital dietitian. Moreover emphasis should also be given on quality of food, its serving and disposal of leftover food.
4. General cleanliness of the wards and toilets should be of high standard to avoid nosocomial infections.
5. Colour coded receptacle bins be provided for segregation of various types of wastes generated at the source.

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PERCEIVED QUALITY OF PHARMACY SERVICES AMONG OUTPATIENTS OF A TERTIARY CARE HOSPITAL IN ISLAMABAD

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Abstract

Introduction: Patient satisfaction with the outpatient pharmacy services is associated with better performing hospitals and improved quality of care. This descriptive study was conducted to describe patient satisfaction towards outpatient health care services provided by the pharmacy department of a major tertiary care hospital in Islamabad.

Methods: This was a hospital based cross sectional study. The study population was male and female outpatients, aged 16 and above. We selected a sample of 241 patients and interviewed them in 2012. The data was collected through structured questionnaires.

Results: The results showed that the overall satisfaction was 82.67%. The patients were most satisfied with attitude of the staff (84%) while least satisfied with courtesy (73.11%). Only 51% were satisfied with the guidance in the hospital, 69% agreed with the explanation to prepare and consume medicine and 59.8% were satisfied with instructions about the proper storage of the prescribed medicine. Only about half of the patients were satisfied with the number of pharmacy staff and toilets and drinking water arrangement.

Conclusion: The pharmacy staff need to be more congenial toward patients and the patients who are often less educated need to be properly guided and explained about the dose, preparation and storage of the medicine. Proper labeling of the medication is also needed. In physical facilities two things need to be improved urgently; the toilets and drinking water facilities. Their number and quality need to be given consideration.

Keywords: Perceived Quality, tertiary care, pharmacy services, patient satisfaction and outpatients.
The goal of pharmacy is to act as part of health care system to ensure safe and effective medication therapy and help ensure optimal patient outcomes. The pharmacy is responsible for providing safe medication to the patient by technically qualified trained pharmacists. Pharmacists play an integral role in patient and family education by educating and counseling the patient about a specific medicine, dispensing of the medicine, when to take and how to take, what are the side effects and interactions and how to deal with any adverse effect if experienced (9). A pharmacy usually consists of several pharmacists and technicians who perform several tasks including, but not limited to: verifying prescription authenticity; stocking, ordering, and filling a wide variety of prescriptions; and handling patient insurance issues. Good communication between the staff is also necessary to guarantee that the processes are being carried out accurately and to make a more proficient working environment. Services provided by pharmacies and healthcare facilities have are related to patients’ perceived value, satisfaction and competitive advantage (10).

It is important to conduct patient satisfaction studies which are comparatively less undertaken in public health sector in developing countries; in particular (11). Satisfaction towards pharmacy services is an understudied subject in Pakistan. The outpatient Pharmacy is the main unit where patients spend their time standing in queues, waiting for their turn to receive the medicine and receive counseling regarding medicines. We aimed this study to determine the level of patient satisfaction about the pharmacy services provided to patients at the OPD pharmacy of a tertiary care hospital of Islamabad, Pakistan.

Methods:
We carried out this cross sectional study at a federal government polyclinic (FGPC), a tertiary care hospital in Islamabad, during April and July 2012. The hospital is oldest hospital in capital city of Pakistan and it was established in 1966. And has about 545 beds. The hospital has a daily turnover of about 3700 patients including both indoor and outdoor healthcare to all federal government employees, their dependents, general public as well as patients from nearby district of province of Punjab and Khyber Pakhtunkhwa. The target population included patients attending the pharmacy of the out patients department (OPD). All outdoor, ambulatory patients above the age of 16 years and of both genders were eligible to be included in the study.

The sample size of was estimated by using the formula for simple random sampling. With the assumption of 52% satisfaction among patients at 95% confidence level and 6% bound on the error level we estimated a sample size of 241 patients. We approached 290 patients in total to complete the sample size of 241 therefore we encountered 49 refusals.

We conducted face to face interviews with a structured questionnaire at the OPD. We pretested the questionnaire on 30 patients before final administration. The questionnaire contained likert scale type questions. The questionnaire was translated into Urdu to maintain consistency. We also asked each of the participant about their views and comments as an open ended question; which made up our qualitative part of the study. A research assistant was trained to collect the data. Ethical approval was obtained from ethical review committee (ERC) of Health Services Academy (HSA) Islamabad. Informed verbal and written consent was taken.

Results:
Quantitative results
Statistical analysis was carried out using SPSS version 16.0. Out of the total 241 respondents, about two third participants (64.3%) were males, 62.67% married; 29.56% were graduates, 18.7.% had secondary and 10% had primary as maximum education. In age range from 21 to 30, 31 to 40, 41 to 50 and 10 to 20 years we had 38.60%, 29% , 20.7%  and 11.6% patients respectively. The majority of respondents (39.4 %) had public sector job as their main occupation followed by self employed (27.4%) and others included retired public servants, labors. About 27%,  26 6% 45.6% of patients made less than 2, 3-5 and more than 6 visits to the hospital in the last month. About 30 % patients lived 1 to 4 km from the hospital.

Although most patients were satisfied with the attitude of the staff but 7% disagreed. Only 51% were satisfied with the guidance given to them by the physicians in the hospital, 69% agreed that they were explained clearly how to prepare and consume medicine and 59.8% agreed that they were given instructions about the proper storage of the prescribed medicine.

Table 1: Patients’ satisfaction with pharmacy staff attitude and behavior

<table>
<thead>
<tr>
<th>Attitude of hospital staff</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>179</td>
<td>74.3</td>
</tr>
<tr>
<td>Not sure</td>
<td>44</td>
<td>18.3</td>
</tr>
<tr>
<td>Disagree</td>
<td>18</td>
<td>7.5</td>
</tr>
<tr>
<td>Communication skills of pharmacists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>160</td>
<td>66.4</td>
</tr>
<tr>
<td>Not sure</td>
<td>39</td>
<td>16.2</td>
</tr>
<tr>
<td>Disagree</td>
<td>42</td>
<td>17.4</td>
</tr>
<tr>
<td>Guidance by doctors in hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfactory</td>
<td>123</td>
<td>51</td>
</tr>
<tr>
<td>Somewhat Satisfactory</td>
<td>95</td>
<td>39.4</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>16</td>
<td>6.6</td>
</tr>
<tr>
<td>No information given</td>
<td>12</td>
<td>2.9</td>
</tr>
<tr>
<td>Explanation about medicine dosage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>168</td>
<td>69.7</td>
</tr>
<tr>
<td>Not sure</td>
<td>44</td>
<td>22.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Explanation about medicine preparation and duration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>166</td>
<td>68.9</td>
</tr>
<tr>
<td>Not sure</td>
<td>54</td>
<td>22.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Explanation medicine storage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>144</td>
<td>59.8</td>
</tr>
<tr>
<td>Not sure</td>
<td>50</td>
<td>20.7</td>
</tr>
<tr>
<td>Disagree</td>
<td>47</td>
<td>19.3</td>
</tr>
</tbody>
</table>
Less than half (43.11%) of the patients were dissatisfied with their overall experience with the pharmacy services. Majority of patients agreed that they were referred to other hospital properly in case of unavailability of a medicine however 82.6% agreed that prescribed medicine were available in the pharmacy. Most (72.2%) of agreed that the waiting time for getting prescribed medicine was acceptable but only about half (56%) believed that dispensing time was long and only 40.2 % agreed that the medicines are properly labeled (Table 2).

### Table 2: Patients' satisfaction with the pharmacy services

<table>
<thead>
<tr>
<th>Referral in case of non availability of medicine</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>169</td>
<td>70.1</td>
</tr>
<tr>
<td>Not sure</td>
<td>25</td>
<td>10.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>47</td>
<td>19.5</td>
</tr>
<tr>
<td><strong>Drug availability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>199</td>
<td>82.6</td>
</tr>
<tr>
<td>Not sure</td>
<td>35</td>
<td>14.5</td>
</tr>
<tr>
<td>Disagree</td>
<td>7</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>No. Of medicine received</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 to 5</td>
<td>59</td>
<td>24.5</td>
</tr>
<tr>
<td>More than 5</td>
<td>42</td>
<td>17.4</td>
</tr>
<tr>
<td>All of them</td>
<td>113</td>
<td>46.9</td>
</tr>
<tr>
<td>None</td>
<td>21</td>
<td>8.7</td>
</tr>
<tr>
<td><strong>Waiting time not too long</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>174</td>
<td>72.2</td>
</tr>
<tr>
<td>Not sure</td>
<td>28</td>
<td>11.6</td>
</tr>
<tr>
<td>Disagree</td>
<td>39</td>
<td>16.2</td>
</tr>
<tr>
<td><strong>Dispensing time not too long</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>135</td>
<td>56</td>
</tr>
<tr>
<td>Not sure</td>
<td>62</td>
<td>25.7</td>
</tr>
<tr>
<td>Disagree</td>
<td>44</td>
<td>18.3</td>
</tr>
<tr>
<td><strong>Labels on medicine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>97</td>
<td>40.2</td>
</tr>
<tr>
<td>Not sure</td>
<td>71</td>
<td>29.5</td>
</tr>
<tr>
<td>Disagree</td>
<td>73</td>
<td>30.3</td>
</tr>
</tbody>
</table>

Qualitative results

Out of the 241 respondents only 36 of the respondents (7%) had suggestions. The patients were generally less satisfied with the waiting time and behavior of the staff. Following are some of the quotes from the patients who chose to comment in response to our open ended question about comments and suggestions with respect to their experience of pharmacy services.

- "Doctors and other hospital staff especially in emergency department are not polite; doctors seem to lacking the experience and confidence. They should be more polite" (Male, 34, Matriculate)
- "On the weekends the large numbers of the patients attend the pharmacy and the waiting time for seeing doctor and getting the medicines is very long so the hospital administration should try to reduce the waiting time" (Male, 37, graduate, government employee)
- "When the patients are waiting for the doctor, there should be given some newspaper/magazine or television." (Female, 39, PhD, a university teacher)
- "The pharmacy Department OPD should have more pharmacists so that the waiting time for the patients can be reduced. The waiting for getting the medicine from pharmacy section is very long and dispensed medicine are not properly labeled." (Mother of a patient, 45, Masters)
- "behavior, especially respect and politeness, of staff towards patients, is important for their satisfaction" (Friend of a patient, 30, male, shopkeeper)
"behavior, especially respect and politeness, of staff towards patients, is important for their satisfaction".

(Friend of a patient, 30, male, shopkeeper)

Discussion:
This study provides an insight to hospital administration, staff and doctors to improve the quality of service and patient satisfaction levels. We found that that more than two third of the participants had high level of satisfaction with health care facilities provided by pharmacy at the OPD, while just less than one fifth of patients had low level of satisfaction. The result of study concur with the satisfaction study done at health centers of a sub-district in Thailand, a study from Pakistan in 2002 which indicated that majority of the respondents were highly satisfied (12). The patient satisfaction aspect of hospital care has been highlighted in a study undertaken in a Qatar hospital, which found that patients were most satisfied with pharmacy services (13). Healthcare workers job satisfaction could also positively effects on the patients care (15). The patient satisfaction varies in different health facilities and circumstances. This variation may be due to difference in quality of services provided or difference in expectations of the patients. The satisfaction regarding the listening of the complaints and the behavior of the doctors and the paramedical staff was found it to be 69.1% and 56.9%, respectively. For this purpose the providers are needed to understand the expectations of patients. The patients were less satisfied from staff attitude and courtesy while mostly satisfied from all the items of the quality of care. The reason being is that majority of the respondents belonged to working class and they had little choices for free of cost medical treatment. When asked about how long they had waited for service at the Pharmacy, 80.27% patients said they had waited for up to half an hour, and that this was acceptable to them which is consistent with other studies. Waiting time in outpatient clinics has been documented to be a source of dissatisfaction among patients (16). As our study was based on single health facility we cautiously recommend it's generalization.

Conclusion:
Patients were found to be satisfied with both the physical and pharmacy dimensions of service, although they are more satisfied with the physical dimension than the pharmacy dimension of service. More pharmacy staff need to be deployed in pharmacy so that patients' waiting time can be reduced. The pharmacy staff needs to be more congenial toward patients and the patients who are often less educated need to be properly guides and explained about the dose, preparation and storage of the medicine. Proper labeling of the medication is also needed. In physical facilities two things need to be improved urgently; the toilets and drinking water facilities. Their number and quality need to be given consideration.

References:
13. Khudair IF, Raza SA. Measuring patients’ satisfaction with pharmaceutical services at a...


MANAGEMENT OF PEPTIC PERFORATION AMONG PATIENTS ADMITTED IN SURGICAL WARD OF CHANDKA MEDICAL COLLEGE HOSPITAL LARKANA PAKISTAN

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Abstract

Objectives: To determine the frequency and management of peptic perforation among the patients admitted in surgical ward of Chandka Medical College Hospital Larkana Pakistan.

Study Design: A descriptive cross sectional study design.

Place and duration: Study was conducted at surgical unit I and II of Chandka Medical College (CMC) teaching hospital Larkana from February 2012 to March 2014.

Methods: Convenient sampling method was adopted by including all the patient of gastric perforation admitted in both surgical units, coming to Out Patients Department (OPD) and referred through medical wards in CMC hospital. Total 50 patients in two year of study period had been enrolled in this study after taking the written consent. Data was entered in the structured Performa and analyzed.

Results: Out of 50 cases of peptic perforation 39(78%)were males while 11(22%)were females. one patients had Ca stomach with perforation. All the patients operated with midline incision. Simple closure with omental patch was done in 48 patients (96%)in one patient (2%)along with Simple closure, gastrojejunostomy was performed another patients perforation was sealed. Post operatively patients developed complications fever12% chest infection22% wound infection 4% brust abdomen2% leakage 4% uremia 12% intraabdominal collection 14% 6 patients (12%) expired 44 patients (88%)improved and discharged with ulcer healing drugs.

Conclusion: Patients of peptic perforation should be resuscitated, rehydrated their electrolytes imbalance and anemia should be corrected before surgery. Surgery should be performed earlier because delay can cause increased morbidity and mortality. Simple closure with omental patch was found convenient, easy and effective modality of treatment for peptic perforation.

Key Words: Peptic ulcer disease, peptic perforation, peritonitis, simple closure and gastrojejunostomy.

Background: Peptic perforation is a common surgical entity usually presents as an acute surgical emergency. Perforation commonly occurs is the 1st part of the duodenum and in the lesser curvature of the stomach. Perforated duodenal ulcer usually presents anteriorly but occasionally a posterior ulcer may also perforates (1). The majority of the patients have preceding history of chronic ulceration but about one third have no history of dyspepsia (2). Peptic perforation is usually complication of peptic ulcer that is not properly treated. There are certain predisposing factors which initially cause peptic ulcer and if these triggering factors are not withdrawn they ultimately lead peptic perforation. These are

- Helicobacter pylori.
- Non-steroidal anti-inflammatory drugs N SAID.
- Hyper secretory states (e.g. Zollinger Ellison Syndrome).

Acute perforation also accompanies situations of stress such as burns, injuries and radiotherapy. Perforation of malignant gastric ulcer is also common and although most of the gastric ulcer is benign so biopsy is important if ulcer is not removed (3-5). Perforating duodenal ulcer is 10 times more common than perforated gastric ulcer duodenal ulcer perforation may be acute or chronic but gastric ulcer perforation is always chronic. The overall mortality of the peptic perforation is around 10%. The mortality is greater in the elderly patients. Perforated peptic ulcer is regarded as an acute surgical emergency that require immediate surgical intervention. Since the
mortality increases rapidly as time passes (6). The Clinical diagnosis of peptic perforation can be confirmed radiologically in most of the cases demonstrating free gas beneath the Diaphragm in erect/sitting posture (7). Definite treatment for peptic perforation is surgery but there are few exceptions for which patients are managed conservatively when diagnosis is in doubt or when patient is old or poor risk (8).

Methods: This was a descriptive cross sectional study conducted in 2012 to 14 in CMC hospital Larkana. The study was carried out on 50 cases who were admitted through causality & Out Patients Department (OPD) or were shifted from medical units after expert surgical opinion. Data was collected by taking detailed history of the patients and after thorough clinical examination. The whole clinical assessment Investigations, operative procedures and operative findings were recorded in the designed proforma. All the patients. Who were admitted in SU-I & II of CMC Teaching Hospital with established diagnosis of peptic perforation after history clinical examination and Investigation were included in this study. However, those patients of peptic perforation who were not operated were excluded from this study. Ethical consideration was taken from institutional review board of CMC Larkana. Data was analyzed and entered through Statistical Program/package for Social Sciences (SPSS) version 20 and descriptive statistics such as frequencies, proportions, mean and percentages were then calculated.

Results: During two years of study period, total number of 50 patients of peptic perforation were studied and assessed. Regarding age distribution 5 patients. (10%) belonged to age group 10-20 years, 09 patients. (18%) were 20-30 years, 09 patients. (18%) were 30-40 years, 16 patients. (32%) were 40-50 years, 11 patients. (22%) were 50 and above 50 years. Regarding sex distribution it was found male preponderance. There were 35 males 70% and females were 15 (30% male female ratio.2.5:1). Patients presented with chief complaints of pain in abdomen 50 patients. (100%) out of 50 cases 29 (58%) had history of vomiting abdominal distension, 34 patients. (68%) absolute constipation 47 patients. (94%) while 19 patients. (38%) have fever. Duration of pain at the time of admission was also assessed 09 patients. (18%) reported in 24 hours of start of pain, 17 (34%) patients. Reported in 48 hours of start of pain, 20 patients. (40%) presented in 3-7 days while 04 patients. (08%) presented after 7 days of start of pain. When past history of epigastric pain & dyspepsia was asked it was positive in 30 patients. (60%) and negative 20 patients. (40%). When patients. Were asked about the history of drugs for epigastric pain it was positive in 20 patients. (40%) and negative in is 10 patients. (20%) while 02 patients. were taking drugs. in the form of analgesic NSAID for headache & joint pain& no. drug history in 18 patients. (36%), regarding personal history of patients. when asked about habits 28 patients. (56%) were smokers, 20 patients. (40%) were non smokers and non addictors of any narcotics. Regarding general physical examination of patients. 37 patients. (74%) had tachycardia in shock 14 patients. (28%) had anemia 36 patients. (72%) had Dehydration while 04 patients. (08%) were shock and 19 patients. (38%) had temperature. Clinical examination (abdominal examination) of the patients. Revealed 45 patients. (90%) had some degree of abdominal distention 50 patients. (100%) had tenderness and rigidity. 37 patients. (74%) had positive shifting dullness 47 patients. (94%) had absent bowel sounds. Bowels sounds were present in 3 patients. (06%) with normal intensity and character. All 50 patients. Under study were subjected to x-ray examination 39 patients. (78%) patients showed free gas under right dome of diaphragm and 11 patients. (22%) showed negative pneumoperitoneum. While multiple fluid gas levels were present in 45 patients. Blood picture (leucocytosis) of the pt. showed up to 11000/per cmm in 42 patients. (84%) patients more than 11000/per cmm patients. in 08 patients. (16%) patients. All the patients. Presented after 06 hours of onset of symptoms large amount of peritoneal fluid was present so simple closure with omental patch (omentopexy) was performed in all patients. except 2 patients. I pt. had tumor in the Stomach along with simple closure Gastruejenunostomy bypass operation was performed, in other pt. perforation was sealed. edge biopsy was taken from all the patients. with pt of gastric perforation to know histopathological features of perforation 38 patients. (76%) were gastric 11 patients. (22%) patients. were duodenal and 1 patients. (02%) was perforated due to CA stomach. In two patients. Before laparotomy peritoneal intubation was performed because both were unfit for G/A. in 1 patients BP was unstable in second pt. along with low BP. he was also ureamic with low urineoutput. One patients. Out of 50 cases had sealed perforation in which case omentum was adhered with duodenum and distal part of stomach, much effort was done to find the perforation after separating the omentum but perforation was not found.

Post operatively record of complications was also noted. patients. developed fever 06 patients. Chest infection 11 pt. (22%) wound infection 4 patient. (8%) leakage 2 patient. 4% uraemia 6 patient. 12% intra-abdominal collection 7 patient. 14%. In this study 6 patient. 12% expired. due to septicemia 05 (10%) and 1 patient. 2% in uraemia due to renal failure Pts. expired more 6% above 40 years age. Out of 50 cases 6 patients. 12% expired due to various causes 44 patient. (88%) improved age wise death is mentioned.
Discussion: In the USA where approximately 4 million people have peptic ulcer disease perforation occurs only in about 5% of patients. With duodenal perforation being nine times more than gastric perforation the highest incidence of peptic perforation in USA has been noted b/w ages of 45-55 years with male to female 2:1 (6). Although number of admission in hospitals related to peptic ulcer is declining in westen data 6 Majority of pt were poor and the general condition and their health was also not good and most of the patients. 28 patient. were cigarette smokers about 1/3 of the patients. have no history of pain or peptic ulcer/dyspepsia. 20 patients. have history of pain for which they were taking drugs but irregularly. 2 patients. were taking drugs for joint-pain or headache so peptic perforation is due to smoking, drugs and improper treatment of peptic ulcer disease. In the USA 4 million people suffer peptic ulcer, perforation occurs in about 5% of the patients. Duodenal perforation is 9 times more than gastric perforation. Which is opposite and against to our study in which gastric perforation is 3.5 more common than duodenal ulcer perforation. The highest incidence of perforated ulcer is between 45-55 years and male to female 2:1 in literature that is also comparable data which is highest in b/w ages 40/55 years and male female 3:1. Duodenal ulcer perforation rate found from 27 per 1 lakh population 1975 to 15 per 1 lakh population 1990 in study conducted at lady reading hospital Peshawar in 1995 56. Gastric perforation rate increased which may be due to smoking NSAID or most probably due to inadequate eradication of H. Pylori which was not screened in this study. All the patient. underwent laparotomy after urgent resuscitation and investigations except two patients. who were unfit for G/A they were peritoneally intubated when condition of the patients. Became better then they were also underwent laparotomy, patients. which were peritoneally incubated before laparoscopy b/z these patients. were unfit for surgery due to septic shock and hypotension. Simple closure with viable omental patch was performed with thoroughly surgical toilet except 2 . in 1. along with simple closure and omental patch gatrojejunostomy was also performed ,this patient had malignancy of stomach with perforation. other patients. Perforation was sealed, only surgical toilet done and drain kept. Simple closure is the most widely used technique for perforation closure first done successfully in 1894 by Henry p Dean. 9The aim was to treat the life threatening complication only as it can be done in a shorter time and does not require special expertise ,The introduction of H2 receptors antagonists and PPI as a successful way of ulcer treatment and discovery of H pylori as a source of chronic ulceration and successful eradication therapy, for it has gained favour of most of the authorities to go for simple closure of the perforation. Abasakoore & associate have forwarded findings on their basis of study that the policy of simple closure followed by the administration of H 2 receptor antagonists is safe effective in the long lesion (10). In our study simple closure with omental patch was found

Table 1: Characteristics and findings of the cases studied

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20 years</td>
<td>05</td>
<td>10%</td>
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<tr>
<td>20-30 years</td>
<td>06</td>
<td>12%</td>
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<tr>
<td>30-40 years</td>
<td>09</td>
<td>18%</td>
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<tr>
<td>40-50 years</td>
<td>16</td>
<td>32%</td>
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<tr>
<td>50 &amp; 50 years</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>70%</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>30%</td>
</tr>
<tr>
<td>Symptoms</td>
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<tr>
<td>Abdominal pain</td>
<td>50</td>
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</tr>
<tr>
<td>Vomiting</td>
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<td>58%</td>
</tr>
<tr>
<td>Abdominal distension</td>
<td>34</td>
<td>68%</td>
</tr>
<tr>
<td>Absorptive constipation</td>
<td>47</td>
<td>94%</td>
</tr>
<tr>
<td>Fever</td>
<td>19</td>
<td>38%</td>
</tr>
<tr>
<td>History of peptic Perforation</td>
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<td></td>
</tr>
<tr>
<td>1 days</td>
<td>09</td>
<td>18%</td>
</tr>
<tr>
<td>2 days</td>
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<td>34%</td>
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<tr>
<td>3-7 days</td>
<td>20</td>
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</tr>
<tr>
<td>More than 7 days</td>
<td>04</td>
<td>08%</td>
</tr>
<tr>
<td>Signs on Abdominal examination</td>
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<td></td>
</tr>
<tr>
<td>Distention of abdomen</td>
<td>45</td>
<td>90%</td>
</tr>
<tr>
<td>Tenderness &amp;Rigidity</td>
<td>50</td>
<td>100%</td>
</tr>
<tr>
<td>Shifting dullness</td>
<td>37</td>
<td>74%</td>
</tr>
<tr>
<td>Bowel Sounds Absent</td>
<td>47</td>
<td>94%</td>
</tr>
<tr>
<td>Bowel sounds audible</td>
<td>03</td>
<td>06%</td>
</tr>
<tr>
<td>Past history of pain in ephigastic region</td>
<td>30</td>
<td>60%</td>
</tr>
<tr>
<td>No history of ephigastic pain &amp; dyspepsia</td>
<td>20</td>
<td>40%</td>
</tr>
<tr>
<td>Drug History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drugs taking for ephigastic pain (irregularly)</td>
<td>20</td>
<td>40%</td>
</tr>
<tr>
<td>Drugs not taking for ephigastic pain</td>
<td>02</td>
<td>14%</td>
</tr>
<tr>
<td>Drugs taking for headache &amp; joint pain</td>
<td>18</td>
<td>36%</td>
</tr>
<tr>
<td>No history of any drug taking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking history</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking cigarettes/Ber</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td>Non Smoker</td>
<td>32</td>
<td>64%</td>
</tr>
<tr>
<td>Signs Noted on general physical examination</td>
<td>37</td>
<td>76%</td>
</tr>
<tr>
<td>Tachycardia</td>
<td>14</td>
<td>28%</td>
</tr>
<tr>
<td>Anaemia</td>
<td>36</td>
<td>72%</td>
</tr>
<tr>
<td>Dehydration</td>
<td>19</td>
<td>38%</td>
</tr>
<tr>
<td>Increased temperature (99-103 f)</td>
<td>04</td>
<td>08%</td>
</tr>
<tr>
<td>Shock</td>
<td></td>
<td></td>
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<tr>
<td>Free gas under Right dome of Diaphragm</td>
<td>39</td>
<td>79%</td>
</tr>
<tr>
<td>Free gas</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>Blood picture of leucocytes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 11000/c mm</td>
<td>42</td>
<td>84%</td>
</tr>
<tr>
<td>More than 11000/cmm</td>
<td>08</td>
<td>16%</td>
</tr>
<tr>
<td>Site of peptic perforation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastric perforation</td>
<td>38</td>
<td>76%</td>
</tr>
<tr>
<td>Duodenal perforation</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>Ca. Stomach perforation</td>
<td>01</td>
<td>02%</td>
</tr>
<tr>
<td>Post-operative complications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>06</td>
<td>12%</td>
</tr>
<tr>
<td>Chest infection</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td>Wound infected</td>
<td>04</td>
<td>08%</td>
</tr>
<tr>
<td>Leakage</td>
<td>02</td>
<td>04%</td>
</tr>
<tr>
<td>Ureemia</td>
<td>06</td>
<td>12%</td>
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<tr>
<td>...</td>
<td>07</td>
<td>14%</td>
</tr>
<tr>
<td>...</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td>Cause of death</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Septicemia</td>
<td>03</td>
<td>06%</td>
</tr>
<tr>
<td>Ureemia</td>
<td>01</td>
<td>02%</td>
</tr>
<tr>
<td>Age wise Distribution of patients Expired</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20 Yrs</td>
<td>01</td>
<td>02%</td>
</tr>
<tr>
<td>20-30 Yrs</td>
<td>01</td>
<td>02%</td>
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<tr>
<td>30-40 Yrs</td>
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<td>00%</td>
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<td>40-50 Yrs</td>
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<td>06%</td>
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<tr>
<td>50-50 Yrs</td>
<td>01</td>
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</tbody>
</table>
affective and appropriate modality for the patients. Of peptic perforation presented in emergency, definite ulcer surgery to prevent recurrent perforation after a simple closure was not performed due to emergency situation of the patients. Post operatively (6) patients expired (12%) who presented late to the hospital and were elderly with comorbidity, mortality rate is slightly higher as compared to western literature around 10%. Laparoscopic surgery for peptic perforation had no advantage over open surgery (11). Non operative management of peptic perforation is gaining popularity but patients in our study presented too late and they were not in the criteria to manage b/z these patients. Should present before hours with minimal collection or no collection on ultrasound examination. In most of the cases the leakage proven by air under the diaphragm has already been sealed and surgery remains unnecessary (12). The morbidity also counts in emergency the overall morbidity was 50 to 70% though current treatment of peptic perforation still largely remain surgical there is considerable post-operative morbidity which may concerned 2/3 of the patients. in another study 30 patients. Suffered pneumonia 10 to 15% w o u n d a b s c e s s. 1 2. In o u r s t u d y 22% patients. suffered chest infection 22% wound and intraabdominal infection mortality rate 12% above figures show high rate of morbidity and mortality due to late presentation and improper diagnosis and referral for proper management. During above period of study after discharging all the patients. they were kept on H2 receptor antagonist or PPI All were advised for follow up weekly fortnightly or monthly for 6 to 8 weeks in in OPD block of CMC teaching hospital larkana. During the above period no any pt. developed recurrent ulcer or complication of peptic perforation. So need of definite surgery or vagotomy or billroths was not required. This study proves that simple closure with omental patch is convenient and most appropriate modality for perforated peptic ulcer disease without definite surgery. Morbidity and mortality can be reduced with active resuscitation and immediate surgery but also early and proper referral to proper place so that patient. Can be managed earlier to prevent from developing complications like septicemia uraemia and respiratory complications which are leading cause of morbidity and mortality in patients. of peptic perforation.

Conclusion:
Peptic perforation is one of the common surgical emergencies encountered by surgeons in surgical practice. It is the commonest complication of peptic ulcer disease, patients usually presents with picture of peritonitis with dehydration and shock usually these patients, present late resulting in increased morbidity and mortality. Most of the patients were gastric 39 patients. (78%) in the lesser curvature and prepyloric area duodenal ulcer perforation were in 11 patients. (22%) in the 1st part of duodenum. Out of 50 patients. 44 (88%) patients improved and went home while 6 patients. (12%) expired due to septicemia and uraemia. Leading cause of death in patients. Of peptic perforation due to late admission or presentation. Simple closure of perforation with surgical toilet was found to be safe and effective method of treatment for peptic perforation, patients post operatively all the patients. kept on medical ulcer therapy, were followed up during study period no ulcer or perforation noticed so definite surgery was not required in presence of ulcer healing drugs.

References:
POLICY MAKERS PERCEPTIONS REGARDING PERFORMANCE OF THE LADY HEATH WORKER PROGRAMME: IS THERE A KNOW-DO GAP? FINDINGS FROM THE NIGRAAN PROJECT

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Abstract

Background: Little data is available about LHW-P managers and policy makers' understanding and perceptions to resolve the issue of stagnant under-5 mortality attributable to diarrhea and pneumonia. An exploratory qualitative study was done through Project NIGRAAN to assess provincial policy makers' views about the challenges encountered by LHW-P for improving the quality of services provided.

Methods: Seven face to face in-depth interviews were held complemented with semi structured questionnaire administered to nine senior and mid-level district and provincial level policy makers. Responses from both methods were grouped, compared and then merged to arrive at five themes; suboptimal skills and technical competence, motivation, governance and accountability, negligible supervision and weak management information system.

Results: Policy makers were aware that LHWs and LHSs' community case management (CCM) skills are sub-optimal. Weak supervision, lack of training, irregular provision of salary and transportation were cited as major factors contributing towards this poor performance. A number of respondents considered LHWs to be overburdened but few suggested any solutions to reduce this work load. Health workers' motivation was considered to be affected by lack of supplies and dearth of recognition for their services. Although mindful of the important uses of data collected by LHW-P, policy makers did not comment on its utility for evidence-based decision making.

Conclusion: Policy makers are aware of the LHW-P challenges that lead to suboptimal CCM for childhood diarrhea and pneumonia. In the absence of political commitment and ownership, improvements in quality and performance will remain a dream.

Word count=246

Keywords: policy makers' perceptions, LHW program, lady health workers, community health workers, Pakistan, lack of interest, political commitment, demotivation.

Introduction: Pakistan's National Program for Family Planning and Primary Health Care, commonly referred to as the Lady Health Workers Program (LHW-P), was launched in 1994 and covers 60 per cent of Pakistan's rural population. As first line community care givers, lady health workers (LHWs) extend basic health care to rural areas of Pakistan. However, despite the deployment of over 128,000 LHWs whose scope of work includes approximately 20 tasks covering all aspects of maternal, new-born and childcare, the under-five mortality rate in Pakistan remains stagnant. For instance, pneumonia and diarrhea, the two major childhood killers still contribute to 30 per cent of all deaths in children under five (1). The 'Fourth External Evaluation of National Program for Family Planning and Primary Health Care' (FENP) conducted in 2008 provides insight into the causes and determinants of this stagnant mortality. Firstly, the LHWs lack skills and are not well prepared in managing cases of pneumonia and diarrhea in the community. Only 8% LHWs are sensitized to the idea of looking for danger signs in the sick child and merely four out of five can correctly diagnose pneumonia. Secondly, the LHSs too have inadequate supervisory and clinical mentorship skills. Although 85% of LHSs report giving a feedback on performance to their LHWs, dismally approximately only 40% of LHWs report receiving the required feedback and only 59% mention that their LHSs conduct a supervisory visit in their catchment

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area (2). This discrepancy demonstrates that gaps exist in the system of supportive supervision and represents an implementation challenge that may be amenable to intervention.

Project NIGRAAN addresses this structural gap in the LHW-P. It is a two-year, community based cluster randomized trial in district, Badin, Sindh Pakistan (3). The aim of this implementation research is to assess the impact of supportive supervision by LHSs on LHWs' performance in order to improve community case management of childhood diarrhea and pneumonia.

In the pre-intervention phase of project NIGRAAN, an exploratory qualitative survey was conducted to assess policy makers' views pertaining to the challenges being faced by the LHW-P, health worker's motivation and the type of performance feedback mechanisms currently in vogue. The study also probed perceptions of policy makers and program implementers with regard to LHW-P's capacity to efficiently supervise and manage childhood diarrhea and pneumonia.

**Methods:** In-depth face to face interviews and a semi structured written questionnaire was used to collect data on perceptions and views of policy makers and program implementers after taking written informed consent. Seven in-depth interviews (6 males, one female participant) were conducted with senior and mid-level policy makers and implementers using an open ended interview guide. Policy makers and program implementers from Department of Health and LHW-P (Sindh province and District Badin) participated in this survey. The experience of working with the LHW-P ranged from 15 - 20 years. The interviews were audio-recorded. These were subsequently transcribed followed by manual content analysis. All transcripts were read through and brief notes were made.

Using the WHO lens of six building blocks (service delivery, health workforce, information, supplies logistics and technologies, financing and governance) (4) a detailed semi structured questionnaire was developed pertaining to functioning of LHW-P in each of these six areas (table 1). Questionnaire was administered to nine policy makers after a routine meeting of project NIGRAAN. Out of these policy makers, four were also part of the earlier conducted in-depth interviews. Following manual content analysis, responses from both interviews and questionnaire were grouped and compared. Similar responses were merged and the results are presented as emergent themes.

**Results**

**Suboptimal knowledge and technical competence**

"The expertise of health workers is horrible"

As per the findings of the available data (2), all the participants expressed that the LHWs and LHSs lacked knowledge to treat pneumonia and diarrhea. They attributed this deficit to lack of training since 2006. Training with practical experience and timely refreshers was mentioned as the most important way to improve health workers' knowledge and skills. Supportive supervision and continuous monitoring and evaluation were additionally mentioned as a means to improve the competence of health workers. In order to ensure the latter maintaining continuous flow of funds from federal to provincial level and keeping a separate head/line item for training component in the budget was emphasized. In order to boost the motivation of health workers especially LHWs, some of the policy makers accentuated the need to regularize their salaries and ensure a smooth supply of logistics and medicines. When questioned about the precise mechanism of flow of funds within the LHW-P, only one of the policy makers (representative from health department Sindh) could actually outline the process in detail.

"Ensure regular salaries to motivate the community to eagerly allow their women to join"

**Motivation**

Majority of the respondents had the opinion that LHWs have quite low job satisfaction leading to suboptimal job performance. Irregular and delayed release of salaries and logistics, unavailability of transport and huge workload were mentioned as the key factors responsible for such demoralization. Provision of a formal service structure, performance based incentives and a formal reward and recognition system were pronounced as some of the factors that had potential to overcome this demotivation and raise the family and community level recognition of LHWs.

With regards to workload, differential views were noted. Most of the policy makers were of the opinion that frequent polio campaigns had overburdened LHWs diverting attention from their main MCH responsibilities. It is noteworthy to mention that few senior level policy makers mentioned LHWs were concerned about their safety and security given the recent terrorist incidents on polio workers in Karachi. Others however, were of the view that since there was a monetary incentive associated with these campaigns they served as a source of motivation.

**Governance and accountability gaps**

"The issue in any vertical program is that it fractures the system"

The representatives from department of health, government of Sindh were of the view that LHW-P faced several governance issues, most notably lack of accountability. Due to dual management of the program (federal and provincial) several implementation matters were not properly synchronized especially those related
to salary dispersion. They mentioned that most of the time provincial government has to resort to bridge financing. This leads to difficulties in retaining the LHWs in the program. There was realization that LHWs play a pivotal role within the Pakistan's health system and that ironically LHW-P implementers lack technical and management skills. Political influence while recruiting LHWs was specifically mentioned as a barrier towards good governance. The latter resulted in employment of ineligible/non-qualified individuals and placement of more than one LHW in the same area leading to overlap in coverage in some areas while the rest were left uncovered. All policy makers unanimously agreed that LHW-P cannot perform optimally with current insufficient number of LHWs. Hiring of new LHWs was suggested aligning deployment to uncovered areas. Policy makers from provincial leadership of the LHW-P suggested using the findings of the third party evaluation of the LHW-P to guide the process of LHWs’ recruitment. In order to overcome the chronic issue of non-availability of supplies and medicines, policy makers suggested networking with other donor organizations to explore additional sources of funding and a better liaison between federal and provincial government. Use of online logistic management information system was also suggested in addition to periodic management trainings for the managers and store keepers to improve their resource management skills.

**Negligible supervision**

"LHSs are supervising as per policy, but quality of supervision is not good because of no POL, limited mobility & lack of training"

Current supervisory mechanism of the program was considered ineffective in improving the performance of LHWs. Respondents were of the opinion that due to lack of timely provision of salaries, transportation, fuel and training the quality of supervision is highly compromised. In the absence of these amenities it is difficult for LHSs to monitor LHWs. Consequently due to lack of accountability LHW absenteeism remains a constant ordeal. It was recommended that LHSs should be provided supervisory training, transportation and fuel in order to improve the current weak system of supervision in the LHW-P. Proper monitoring of the LHSs by the LHW-P coordinators at district and provincial level was also suggested.

"Supportive supervision is understanding the needs of the workers"

When probed on the concept of supportive supervision, it was evident that program managers and implementers understand the concept of supportive supervision and consider it as an integrated element of LHW-P curriculum. In fact, enhanced supportive supervision of LHWs by LHSs and regular field visits by LHSs were recommended by majority of the respondents for improving the monitoring and performance of LHWs.

**Weak Management Information System (MIS)**

"A mechanism exists but seems non-functional and the needs are that a technical team which may comprise of field program officers, district coordinators & assistant district coordinators should analyze the data and the deputy provincial coordinator & provincial coordinator of the project should take some concrete decisions accordingly”.

Majority of the policy makers were unaware of the MIS indicators of the LHW-P and most of them admitted that they did not go for the verification of data received through LHWs. Only a few mentioned the need for random field visits for the purpose of monitoring and checking data discrepancies. Majority of the participants mentioned that annual LHW-P reports highlighting budget and program performance indicators were not available.

All policy makers had the realization that data collected by LHWs was important but was not being utilized for any decision making purposes. Only a limited number of respondents said that they use the data for understanding the health needs of the population and for continuous quality improvement. No further information was however provided by the participants on their process of decision making. When probed on the existence of a programmatic mechanism for analysis, synthesis and validation of health data collected by LHWs monthly report, majority of the respondents did not answer.

**Discussion**

Findings of our study suggest that while policy makers and program implementers are well aware about the issues in the LHW-P leading to sub-optimal performance indicators, they are not prepared to come forward to address these challenges.

Sub-optimal technical competence, low motivation, governance and accountability gaps, negligible supervision and weak information systems were cited as key issues confronted by the LHW-P. These factors have been identified as drivers of policy change by those engaged in making public health policies (5). However, despite this awareness, the dearth of technical and management skills amongst the policy makers themselves impairs effective implementation of plans.

Regarding LHWs' knowledge and technical competence, most respondents felt that these were inadequate. Lack of formal training or refresher sessions for past several years were identified as the underlying cause. These perceptions of policy makers corroborate with the findings of other studies conducted...
nationally and internationally including previous evaluations of the LHW-P (2, 6, 7). A study conducted in India also demonstrated the crucial role of community health workers’ (CHWs) knowledge in improving community based programs for newborn care (8). However, despite awareness, no plans were suggested to address the root cause of this problem.

Studies have demonstrated that lack of salaries, medical supplies, logistics, training and work overload are important causes of demotivation for CHWs with a consequent negative impact on their performance (6, 9, 10, 11). In a study conducted in Kenya, policy makers identified formal training, equitable resource allocation, recognition and supportive supervision as important means for improving motivation of CHWs (12). These findings are complementary to the perceptions of the policy makers explored in this study. It is therefore obvious that policy makers and implementers have an in-depth understanding of the factors affecting the performance of LHWs and LHSs. It is ironic, however, that no measures were recommended to address these motivational issues.

While acknowledging the fact that there are deficiencies in supervision of LHWs, all respondents considered effective supervision to be necessary. It is noteworthy to mention that while structured supportive supervision is a key component of LHW-P, evidence shows that supervision is inadequate both in terms of quality and frequency (13). Due to this, the supervisory mechanisms of the program fail to produce the desired result resulting in poor performance of LHWs. In a study conducted in Mozambique, policy makers identified the lack of trainings and unavailability of resources as barriers to effective supervision of CHWs (14). Available literature shows that supportive supervision is associated with increased productivity of health workers (15). However, our study found that there was lack of willingness by policy makers to ensure adequate resources (transport, supplies and training) for addressing the gaps in program’s supervisory mechanisms. The fact that most of the respondents considered feedback as just a reporting mechanism could mean that the crucial role of feedback as a mechanism of structured supportive supervision in not adequately appreciated and understood at the management level. Policy makers and program implementers thus need to devise strategies to ensure proper deployment of supplies and availability of resources for adequate supervision and program monitoring.

Despite awareness of the importance of monthly data collected by LHW-MIS, policy makers working at district and province level reported its utility as being minimal. They were aware of the absence of mechanisms to validate the quality of monthly data sent by LHWs. Independent evaluation of LHW-MIS has revealed inaccuracies in data collected by LHWs despite high rate of reporting. The evaluation shows that while reporting, there is more focus on indicators of family planning whereas indicators on maternal and child health were found to be less accurate (16). This clearly highlights the need for mechanisms to ensure data quality. However, none of the policy makers pointed this out in our study. Not surprisingly, respondents while cognizant that data collected by LHWs is useful to understand the disease patterns did not comment on establishing mechanisms for ensuring utility of data collected for timely decision making. Undoubtedly, therefore while the credibility of this type of data collection system is well established in India (8), the MIS in LHW-P is a missed opportunity to improve program performance.

Surprisingly, most of the policy makers with years of experience at senior positions were unaware of the funds disbursement mechanisms within the program. Though many of them identified lack of funding as a root cause of poor LHW-P performance, yet no one suggested any remedial actions to overcome this long-standing programmatic challenge. It was evident from the discussion with policy makers that they were aware of the lack of ownership of LHW-P at provincial level particularly after devolution. However, no one recommended any policy level changes to tackle this important predicament.

Our study had some limitations. Information obtained from selected policy makers using qualitative mode of inquiry cannot furnish generalizable evidence. However, methodological triangulation was used to increase the rigor of the findings. Themes emerging out of this study warrant further research by designing robust studies across all provinces using a mix of quantitative and qualitative methods in order to draw inferences at a national level.

**Conclusion**

Though policy making is a complex process, this study provides some indication on the "know-do gap". Despite having a clear understanding of issues; there was reluctance on the part of the policy makers to take the responsibility to lead from the front for addressing the challenges being faced by the LHW-P. This reluctance could be a manifestation of the contextual intricacies involved in the overall process of policy level decision making after devolution but does indeed indicate a governance gap. Thus in the absence of political commitment and ownership, improvement in program performance will remain a dream.
Table 1: Semi-structured questionnaire using WHO six building blocks framework

| Service delivery       | • Workload                                      |
|                       | • Quality of LHWs’ performance                  |
| Health workforce      | • Competence of LHWs                            |
|                       | • Trainings                                     |
|                       | • Key challenges faced by LHWs                  |
|                       | • Motivating/demotivating factors for LHWs      |
|                       | • Supportive supervision                        |
|                       | • Supervisory mechanism within LHW-P            |
| Information           | • Utility of information collected by LHWs      |
|                       | • Means to verify the authenticity of collected data |
|                       | • Awareness of policy makers about the LHW-P indicators |
| Supplies, logistics and technologies | • Chronic issue of lack of supplies, basic medicines and logistics |
| Financing             | • Flow and disbursement of funds within the program |
|                       | • Lack of funding                               |
| Governance            | • Ownership of the LHW-P after devolution       |
|                       | • Availability of policy guidelines and annual reports at provincial level after devolution |
|                       | • Accountability and supervision                |

References


Abstract

**Objective:** To compare the preference of voluntary blood donation to replacement blood donation among medical college students in Federal Medical and Dental College.

**Methods:** The study was cross sectional survey conducted at Federal Medical and Dental College, Islamabad from August to September 2015. After obtaining informed written consent from the participants, data was obtained via structured questionnaires. 267 individuals both males and females were included in the study using convenient sampling technique. The data was analyzed using SPSS version 20, and presented as tables, charts.

**Results:** The participants aged 19-23 years of age included 167 (62.5%) females and 100 (37.5%) males. Donors included 69 (25.8%) participants (51 male versus 18 females). Voluntary blood donors were 53 (76.8%), Replacement blood donors were 2 (2.9%) whereas 14 (20.3%) participants donate as both Voluntary and Replacement blood donors. There are 198 (74.2%) participants who do not donate blood (149 female versus 49 male).

Twenty-nine (42%) donors think that Voluntary blood donation is important as it ensures timely supply of blood, 13 (18.8%) think that Voluntary donation is safe for use and is infection free, 27 (39.1%) consider that large storage of blood can be maintained in blood bank by Voluntary blood donation.

**Conclusion:** Educated youngsters are more inclined to voluntary blood donation. However female donors need more encouragement. Adequate awareness and motivation regarding benefits of regular Voluntary blood donations is required.

**Keywords:** Replacement, Voluntary, blood donation.

Introduction

The demand-supply gap between blood donors and patients is huge all over the world (1). The issue is more serious in developing countries due to lack of awareness, lack of education at the level of community and lack of training and expertise at the level of health professionals in managing transfusion related services. It is reported that in 2013 for an estimated 234 million major operations performed, there were 92 million blood donations which are insufficient to meet the gap (2). According to a report, there are 28 blood donations per 10000 population in Pakistan (3). Significant contributions to this donation comes in the shape of Replacement blood donation or paid donations (4). It is reported that in 2012 70% donations were replacement or paid for donations (5). To overcome this grave need, measures should be taken to recruit low risk voluntary blood donors (6). To achieve this end university students, particularly from medical universities, can be of immense help. However the current situation is not very promising as most of the university students are not regular blood donors (7). It is because of myths, misconceptions, (even among educated youngsters), fear and lack of knowledge regarding voluntary blood donation (8). Youngsters can play pivotal role to meet the demand of safe blood by becoming regular voluntary blood donors (9).

**Methods**

After getting written informed consent of the participants a cross sectional comparative study was conducted in Federal Medical and Dental College which included students from first year to fourth year MBBS in a duration of one month (August- September 2015). Sample size was 267, calculated by using WHO calculator. A structured questionnaire was designed to compare the trend of Voluntary versus Replacement blood donation. Participants were selected by convenient sampling technique.

A pilot research was conducted to assess the trends. Structured questionnaires were provided to be
filled in by the participants.

The demographic data variables included gender, weight, class, blood groups, membership of any blood donation society or organization, knowledge and trend regarding blood donation. The data obtained was analyzed using SPSS version 20. Anonymous data was analyzed and nominal data was presented as table, graph, pie charts etc. for interpretation.

Results

The mean age of studied population (n = 267) was 19-23 years. There were 167 (62.5%) females and 100 (37.5%) males. Participants included all the students of medical college, with the largest number hailing from Fourth year (n= 86, 32.2%), followed by Third year (n= 71, 26.6%), First year (n= 57, 21.3%) and Second year (n= 53, 19.9%). Most of the participants (n= 163, 61.7%) had weight less than 60 kg. Among the participants B+ blood group was most prevalent (n = 93, 35%), followed by O+ (n = 67, 25.3%) and A+ (n = 63, 23.7%). Seventy three (32.7%) participants were members of some blood donating society/organization.

Out of 216 participants, 69 (25.8%) donate blood. Among donors 51 (73.9%) were male and 18 (26.1%) are female. Most of the donors (n=25, 35.2%) donate blood approximately once a year.

Fifty-nine (75.6%) donors donate blood as Voluntary blood donation, 3 (3.8%) donates blood as Replacement blood donation and 16 (20.5%) donate as both Voluntary and Replacement blood donation.

When asked about the importance of Voluntary blood donation 29 (42%) donors think that Voluntary blood donation is important as it ensures timely supply of blood, (13) (18.8%) think that Voluntary donation is safe for use and is infection free, 27 (39.1%) consider that large storage of blood can be maintained in blood bank by Voluntary blood donation.

One hundred ninety eight (74.2%) participants do not donate blood, out of which 149 (75.3%) are females and 49 (24.7%) are males. Most of the non-donors said that they never got a chance of donating blood (n= 86, 43.4%), 39 (19.7%) did not donate as they were under-weight while 36 (18.2%) participants stated anemia as their reason for not donating blood. Lack of family support for donating blood was also faced by 27 (13.6%) participants.

When questioned about which mode of blood transfusion should be preferred, 138 (69.4%) opted Voluntary blood donation whereas 10 (5.4%) prefer Replacement blood donation. Fifty (25.2%) consider both Voluntary and Replacement blood donation as equally important. Regarding the importance of Voluntary blood donation 77 (38.7%) non-donors think that it ensures timely supply of blood, 33 (16.7%) think that it is safe and infection free blood and 88 (44.7%) consider that voluntary blood donation helps maintain large storage of blood in blood banks.

A vast majority of participants (n= 209, 93.3%) denied donating blood for money.

Ninety three participants (41.5%) were satisfied with the safety measures taken during blood donation however the majority was either not sure about it or thought otherwise.

Knowledge about the duration after which blood can be donated was found out to be adequate as 206 (92%) participants answered it to be 120 days.

Most of the participants donate blood to help community (n=116, 52%), while others consider it a righteous deed (n=103, 46.2%).

Discussion

In the present study 25.8% participants donate blood which is less than the percentage reported (50.1%) in a similar study conducted in Karachi by Ahmed Z et al (10). However our findings report better trends than in India (10.75%) (11) and Nigeria 22.1% (12). Nepal has a higher rate of blood donation (28.5%) as reported by Amatya M et al (13).

Among donors males have a higher share (73.9%) than females (26.1%). This finding is supported by Ahmed Z et al (10) who reported the share of donations by Males to be 74% versus 26% by Females. Nwogoh B et al (12) also reports that male workers are more likely to donate blood. However this trend is rejected by Lightman (14) who reports Canada has roughly equal male female ratio for Voluntary Blood Donation. Voluntary blood donation in the current study comes out to be 75.6% which is less than that reported in Nigeria (12) 41.7%.

In our study 92% participants had adequate knowledge which is also supplemented by Ahmed Z et al (10) but India (11) has only 35.65% knowledge among undergraduate medical students. Present study finds that most of the donors donate blood once a year (35.2%) whereas in Tamil Nadu (11) 10.75% of the donors had donated blood only once.

Most of our participants states helping community to be their reason for donating blood (52%). Canadian researcher (14) also finds that most of the participants donate blood as a desire to help others (male: 29.1% versus female: 34.0%). The potential for Voluntary non ruminated blood donation among educated youngsters is very high. With adequate awareness regarding benefits of regular Voluntary blood donations, especially targeting female population, the goal of 100% Voluntary blood donations can be achieved. To this end, any misconceptions related to voluntary blood donation that may be prevalent in society at large should be addressed.

More efforts are needed at the level of individual as well as community, blood donation societies and NGOs to promote Voluntary blood donation via seminars, lectures, community-services groups, competitions and the use of mass media.
A larger sample size will decrease the validity of the study.

Table 1: Voluntary versus Replacement Blood Donation

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary Donation</td>
<td>59</td>
<td>75.6</td>
</tr>
<tr>
<td>Replacement Donation</td>
<td>3</td>
<td>3.8</td>
</tr>
<tr>
<td>Both</td>
<td>16</td>
<td>20.5</td>
</tr>
</tbody>
</table>

Figure 1: Percent distribution between males and females

Figure 2: Importance of voluntary blood donation

References
4. Bönig H., Schmidt M., Hourfar K., Schüttrumpf J., Seifried E. Sufficient blood, safe blood: can we have both? BMC Medicine 2012;10
OUTCOMES OF PUERPERAL SEPSIS AT A TERTIARY CARE HOSPITAL OF PAKISTAN

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Abstract

Introduction: Puerperal sepsis is considered as the leading cause of maternal morbidity and mortality in Pakistan. Hence, it is ranked in top five causes of maternal deaths in country which can be averted through preventive measures. The objective of this study was to determine the patterns and outcomes of puerperal sepsis cases admitted to a major tertiary care hospital of Sindh Pakistan.

Methods: This cross sectional study was carried out in Liaquat University of Medical & Health Sciences Hospital over a period of Six months. All patients admitted with diagnosis of puerperal sepsis were evaluated with thorough details of history and examination to determine their demographic details, obstetrical profiles, presenting features, state of infectious morbidity, need for intervention and mortality related to puerperal sepsis. However, severe cases with complication and other diseases were excluded from the study. Data was collected on pre-tested, piloted, validated tool after taking the written consent.

Results: Nearly half of the patients were between 15-25 years of age group and two thirds of them belong to poor families and about half of the woman had completed only primary education. Majority (65.7%) of the patients in our study has delivered in a local private or public sector hospital in their place of residence. More than half of the deliveries were 57.2% were normal vaginal deliveries, 36% took place normally but has required some assistance including episiotomy to deliver and 15% had delivered through caesarean section.

Conclusion: Study concluded that puerperal infections occur at very high rate in young women. Most of such women had normal vaginal delivery mainly at home or in a health private or public health facility.

Key words: Puerperal Sepsis, Maternal morbidity, Maternal mortality, Post partum haemorrhage, episiotomy and normal vaginal delivery.

Background

Puerperal pyrexia is fever within 14 days of delivery of baby and puerperal sepsis is an infection of the genital tract which can occur during labour and the 42nd day of delivery with two or more manifestations of pelvic pain, fever, abnormal vaginal discharge and delay in the reduction of the size of the uterus (1). Puerperal infection comprises of infection of uterine endometrial and abdominal and perineal wounds and cuts occurring during delivery of the baby. Puerperal infection is not only associated with over 10% of maternal deaths but Puerperal it delays postpartum restoration, requires women to be hospitalized and interfere the development of bonding between mother and infant(2). In most cases ending up with severe complications the causative organism is Group A streptococci and about 30% women are usually carriers of this organism(3). However an extensive reviews of such association of organism with the puerperal infection concluded that Neisseria gonorrhoeae and Chlamydia trachomatis were most frequent bacteria in resource poor settings of developing countries (4). Most cases occur within 24 hours after the delivery of a baby in a health facility or in after birth at home. As women and birth attendants lack sufficient knowledge and skill to diagnose or refer the cases of puerperal sepsis in time many women die within communities in developing countries before seeking care (5). The infection is more frequent after a
vaginal than the caesarean delivery, especially in developing countries, which shows that the women delivering in rural areas, poorly equipped health facilities and within homes are vulnerable to the puerperal infections and other maternal complications (6).

Complications around maternity, including puerperal sepsis, are the leading causes of mortality and disability in Pakistani women in their childbearing age. With a maternal mortality ratio of 297 per 100,000 live births, in 2007, Pakistan was one of the 6 countries contributing to more than 50% of all maternal deaths worldwide. Despite of various efforts under the umbrella of safe motherhood and Millennium development goals (MDGs) Pakistan has had slow progress in improving maternal health and preventing of deaths around parturition. Hence the country has also not been able to achieve its MDG targets under the goal five (7).

With equitable and universal health access and coverage of population and ensuring birth preparedness and complication reduction during pregnancy and child birth most of the maternal death can be prevented (8). Although currently 73% Pakistani women seek antenatal care (ANC) from skilled providers and 58% received two doses of Tetanus Toxoid injections; still only 52% with a skilled provider and half of deliveries still take place in homes; mostly with unskilled traditional birth attendants. Moreover, although, about 60% receive postnatal care within two days of delivery; only half of them attend any skilled provider. More importantly these are country averages and the burden of maternal morbidity and mortality is way too high in rural areas of the country (9).

Given this scenario we believe that the complications of childbirth are expected to be high among women delivering in homes or even with private and public health facilities which do not maintain quality of care, including infection prevention, during normal deliveries. We aimed, in this study, to determine the patterns and outcomes of puerperal sepsis cases admitted to a major tertiary care hospital of Sindh Pakistan.

**Methods:** We conducted this cross sectional study in the Obstetrics and Gynaecology unit of a major public sector tertiary hospital in Hyderabad. The hospital is one of the oldest in the country and attached with the first public sector medical university in the province of Sindh. Hyderabad has an estimated population of about 2 million however the hospital is frequently utilised by adjoining districts because of presence of highly qualified and trained staff and availability of advanced healthcare facilities. We selected a sample of 236 women who had delivered within 42 days and were diagnosed of puerperal sepsis. The sample was completed during the six month period from September 2012 February 2013 through a convenient sampling method. Diagnostic criteria of PS included both clinical finding as well as laboratory results of the patient, mainly; systemic signs and very high or very low White blood cell count. The cases were eligible to be included in the study regardless of whether they delivered in the hospital where the study was conducted or outside at home or in a public sector primary or secondary level health facility. We included these cases regardless of their district of origin as the hospital allows referrals from most adjoining districts of province of Sindh. Women with complications like PPH or retained placenta, eclampsia and systemic illnesses like malaria, typhoid fever were excluded from the study which we assumed were not related to birth of the baby. A structured questionnaire was used to collect data through examining the admitted patient’s file as well as by interviewing the attendant of the patient; once the diagnosis of PS was confirmed. The data collection effects on mother’s health including admission in the Intensive care unit (ICU), infection, stays in hospital, mode of delivery, intestinal obstruction and death were recorded. Prior written consent was obtained from all of the participants or their attendant. We did not collect any biological specimen as part of the study neither did we conduct any clinical examination on the patient for the sake of our study; however we obtained the information from patient files and the attendants. Ethical approval for the study was obtained from ethical board of LUMHS Jamshoro.

**Results:** Majority (46.2%) of the women were between 15-25 years of age group. Most (61.5%) were primiparous, 70% were socioeconomically belonged to poor families and while about half of the woman had completed only primary education, about 7% were illiterate and rest has secondary and intermediate level education. Majority (65.7%) of the patients in our study has delivered in a local private or public sector hospital in their place of residence away from Hyderabad, about a quarter delivered at home and 8.8% has delivered in the hospital where the study was conducted this study. More than half of the deliveries were 57.2% were normal vaginal deliveries, 36% took place normally but has required some assistance including episiotomy to deliver and 15% had delivered through caesarean section (Table 1).

**Table 1: Place and type of delivery among women with puerperal sepsis**

<table>
<thead>
<tr>
<th>Place of birth</th>
<th>n</th>
<th>percent</th>
</tr>
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<tbody>
<tr>
<td>A Local hospital</td>
<td>155</td>
<td>65.70</td>
</tr>
<tr>
<td>Home</td>
<td>60</td>
<td>25.40</td>
</tr>
<tr>
<td>Tertiary care hospital</td>
<td>21</td>
<td>8.80</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Type of delivery</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal vaginal delivery</td>
<td>135</td>
<td>57.20</td>
</tr>
<tr>
<td>Instrumental vaginal</td>
<td>86</td>
<td>36.40</td>
</tr>
<tr>
<td>Caesarean section</td>
<td>15</td>
<td>6.40</td>
</tr>
</tbody>
</table>
These cases of puerperal sepsis had presented with high grade fever; which was most frequent of the symptoms, pain in the abdomen, vaginal discharge, dehydration, abdominal distension and other systemic symptoms including shock and toxaemia.

**Table 2: Descriptive characteristics of women with Puerperal sepsis**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signs and Symptoms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>210</td>
<td>88.90</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>169</td>
<td>71.60</td>
</tr>
<tr>
<td>Vaginal discharge</td>
<td>141</td>
<td>59.70</td>
</tr>
<tr>
<td>Dehydration</td>
<td>99</td>
<td>41.90</td>
</tr>
<tr>
<td>Abdominal distension</td>
<td>51</td>
<td>21.60</td>
</tr>
<tr>
<td>Toxaemia</td>
<td>46</td>
<td>19.50</td>
</tr>
<tr>
<td>Shock</td>
<td>7</td>
<td>2.90</td>
</tr>
<tr>
<td><strong>Complications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged hospital stay</td>
<td>91</td>
<td>38.50</td>
</tr>
<tr>
<td>Wound infection</td>
<td>56</td>
<td>23.72</td>
</tr>
<tr>
<td>Death</td>
<td>24</td>
<td>10.16</td>
</tr>
<tr>
<td>ICU admission</td>
<td>14</td>
<td>5.90</td>
</tr>
<tr>
<td>Renal failure</td>
<td>6</td>
<td>2.50</td>
</tr>
<tr>
<td>Intestinal obstruction</td>
<td>4</td>
<td>1.60</td>
</tr>
</tbody>
</table>

Prolonged hospital stay of more than ten days duration was most frequent of the complication occurring in 38.5% of the cases. Wound infection was found in a quarter of patients with Caesarean section and episiotomy cases. Intestinal obstruction, renal failure and requirement for intensive care were least frequently occurring complications but about 10% of the cases could not survive these complications (Table 2).

**Discussion:** Our study underscores the high burden of puerperal sepsis arising from child birth. Not only this but the data suggests that as most of the cases of puerperal sepsis had been from outside the hospital, where we conducted this study, the quality of health services given to these women either during home deliveries or in health centres must have been seriously compromised. Our sample consisted of most women in young age bracket and it is evident that young pregnant women have higher risk of development of complications during childbirth(10). We found that most women were brought to the hospital from outside the hospital this is possible that these women belonged to rural areas around the city of Hyderabad. Rural areas have very high burden of complication during childbirth due to various reasons; including poor quality of care and lack of access to health facilities (11). Our results are consistent with a study from rural areas of Sudan which also showed a high burden of puerperal sepsis in women (6).

As most women in our study had delivered normally, it also suggests that more of these women had experienced puerperal sepsis than those who has delivered by Cesarean section, which is consistent with studies from other settings (12). One reason for this relation could be the lack of clean environment during delivery of the baby during normal delivery as compared to during Cesarean section where the women generally receive care from specialists in hospitals.

Most important complication in women with puerperal sepsis in our study was a lengthy hospital stay which is a sign of slow recovery from the infection and is a risk of development of complications during hospitalization such as hospital acquired infections (13). We found a quarter of women suffering from wound infection as related with puerperal sepsis. Infections in delivering women are common if the labor is prolonged or the digital examinations are too frequent without regard for hygiene (14).

We expect that a large number of cases of puerperal sepsis may not seek health care which is highly emergent in such a situation but as the literature has suggested a lack of awareness about the symptoms of infections after parturition does not prompt such care seeking behavior; especially among women of poor communities (15). As the women in our study were less educated and poor; they were into more advanced stages of their illnesses required hospitalization even in ICUs or a significant 10% of women failing to recover from their complications.

**Conclusion:** We conclude that puerperal infections occur at very high rate in young women. Most of such women had normal vaginal delivery mainly at home or in a health private or public health facility. A large number of cases in our study had symptoms and signs of puerperal sepsis at the time of admission to the hospital. Therefore most of the women had to stay for a prolonged periods of time because of the wound infection, systemic complications. The death rate of 10% in our sample is very high. Our results indicate towards implementation of interventions to improve deliveries with skilled birth attendants, proper infection prevention practices and availability of timely referral mechanism in order to prevent systemic infections among women during post partum.
References:
EMPLOYEE AWARENESS AND PERCEPTION OF SEXUAL HARASSMENT AT HOSPITALS: AN EXPLORATORY STUDY

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Abstract

Objective: The Protection against Harassment of Women at Workplace Act' was passed in Pakistan in 2010 to promote a safe working environment for women. The objective of the study was to assess the awareness of healthcare providers about the Act and its implementation in the public sector hospitals of Islamabad.

Methods: A qualitative study was carried out with the working staff of public sector hospitals in Islamabad. Altogether 18 participants were interviewed; 13 doctors, 3 nurses and 2 health managers who had been working at the hospitals for at least the past 6 months. Display of information and general awareness about the Act, organization-specific actions taken to implement the Act of 2010, common practices and experiences along with perceptions regarding workplace harassment of women and possible training/management needs were assessed.

Results: The three themes identified in the study were: 1) Poor Harassment Awareness Information and implementation; 2) need for implementation of Act; 3) Poor recognition of need for Protection against harassment. All the participants explained that there was no visually displayed information that promoted awareness against harassment of women at workplace at their hospital. Only 12 respondents were aware of the Act. Most respondents expressed their doubt about the effectiveness of the Act even if it were implemented.

Conclusion: The study showed that healthcare providers had poor awareness about the Harassment Act. Moreover, they do not recognize the need for it as they feel that it is not possible to implement it in true spirits.

Key Words: Workplace, females, provocation/health care.

Introduction:

Sexual Harassment is one of the most prevalent breach of human rights; it can be posed in both subtle and obvious manners leaving a lasting impact on the victim. Unfortunately, it is so deeply engraved in today's society that it is almost overlooked (1). Harassment is very common in public spaces but facing such a threat at work inhibits an employee; and the fear of dishonoring their family sometimes leads to quitting the job (2).

The International Labor Organization describes sexual harassment in the workplace as, "a verbal or physical act with a sexual nature, performed in recruitment or in the workplace by a boss, manager, employee, client or customer of a working unit, that is unwelcomed by the person receiving it and has caused the person to feel violated, insulted, and being in an unbearable hostile environment". The physical or verbal gesture may range from jokes with a sexual nature to forced physical contact (3).

An illegal behavior such as harassment creates an environment that is hostile and intimidating and can interfere with a person’s performance at work. Experiences of sexual harassment are seldom reported by female victims. Women do not report such incidents for many reasons including fear of humiliation, being ignored, retaliation or getting fired (5).

Evidence of sexual harassment of women at workplace are not well recorded in many Asian countries. However, the practice can be assessed and monitored through various steps taken towards curbing the action by institutionalizing ways of dealing with the crisis. For example, an Anti-Sexual Harassment Act was passed by the Philippines which stood by zero tolerance towards sexual harassment at work (6).

In Pakistan, an estimate of 24,119 cases of violence against women have been recorded during 2008-2010 out of which 520 cases were attributed to workplace harassment. This signifies under-reporting of incidents masking the actual number of cases that could be indicated (7). However, it was found that in Karachi alone, about 78 percent of working-women form different sectors, inclusive of domestic workers, face sexual harassment in one way or another (8). A few bold incidents have been reported by newspapers and the electronic media implying that workplace in Pakistan can be labelled to be unsafe for women (9). The situation
is sometimes deemed so grave that it seems that the instant a woman leaves her home for work or to study she becomes vulnerable to being harassed (10). Women employed at banks, hospitals, offices, private homes and factories faced different forms of sexual harassment (8). Harassment of women at workplace have also been recorded in Pakistani organizations functioning at international level (11).

In order to promote a safe work environment for women, the Protection against Harassment of Women at Workplace Act was passed in 2010 (12). The Act made it mandatory for every organization, whether private or public to form an internal committee to implement a Code of Conduct to ensure protection of women against harassment; The Code of Conduct for organizations was to be in accordance with the law and would guarantee immediate action against any complaint of sexual harassment. It was also urged the justice maybe done swiftly in order to curb any possible retaliation. And failure to comply with the Act warned employers of consequences in the form of heavy fines (13). Pakistan also advocated women rights on International forums by being signatory to a few documents, however there is lack of implementation of pledges made (14). Some organizations such as banks have been known to set up cells to deal with such incidents but the health and education sectors where women mostly work are lagging behind in implementation of the Act in true spirit (2).

The current study was designed to assess the awareness of health care providers about "The Protection Against Harassment of Women at the Workplace Act 2010" and its implementation in the public sector hospitals of Islamabad. The study also explored the extent to which the Harassment Bill of 2010 was implemented and how it was perceived by the health care providers.

Methodology:
A qualitative study was carried out with the working staff of public sector hospitals in Islamabad. A total of 18 hospital staff members, including 7 females and 11 males, were approached during work hours through purposive convenience sampling. The study included 13 doctors, 3 nurses and 2 health management staff members who had been working at the hospitals for at least the past 6 months.

Each participant was approached for a one-on-one interview after signing an informed consent form. Each interview was recorded. The interview covered following three domains: 1) Display of information and general awareness about the Act; 2) Organization-specific questions regarding the extent of the implementation of the Act of 2010, common practices and experiences; 3) Perceptions regarding workplace harassment of women and possible training/management needs. Each interview lasted for approximately 30 minutes. The responses were transcribed and content analysis done. Text was coded from which categories and themes emerged.

Results:
The three themes identified in the study are described as under:

1) Poor Harassment Awareness Information and implementation
All the participants explained that there was no visually displayed information that promoted awareness against harassment of women at workplace at their hospital. Participants also commented that there was no information on the act, "when or where" it had been implemented and "if at all" the hospital had done anything about it.

"No formal training is given to a new employee during orientation; it is not part of any training nor a trend".

2) Need for Implementation of Act
Only 12 respondents were aware of the Protection against Harassment of Women at Workplace Act (2010) of which, only 4 were females. None of the respondents were aware of the implementation of the Act. When probed about their opinion regarding the implementation of the Act, the respondents shared that is was important to introduce the Act formally because the "management" needs to realize the importance of such issues. Participants also indicated the usefulness of the implementation of Act as many agreed that many complaints pertaining to women being harassed would either get "diverted" or "ignored":

"It would be very helpful especially in this society because there are many complaints which have been submitted but nothing has been done for them."

Another respondent stated:

"The act should be implemented herein full spirit and made part of a formal orientation. When there are proper policies and rules and regulations in place, then people will follow them. If there is an Act that has been passed and we are supposed to follow it, then we should follow it."

Yet another perspective that was shared was regarding the Act's misuse by employees:

"I think that this policy is not implemented in full spirit as it would be misused by women 90% of the time and properly used only 10% of the time."

"I have been working here on rotation and never had any orientation about the hospital policies. There is no need for a harassment policy here; the workplace culture is already fine."

3) Poor recognition of need for Protection against harassment
Among the 18 respondents, 15 had not heard of a harassment case at the hospital. However, those who
had heard of such a situation claimed that it never came "out in the open" and was never addressed: "A female house officer was harassed by a doctor and a complaint was submitted. This complaint should be on record. Nothing happened".

Another respondent shared:
"It's not common. I've heard of it a few times. In my experience, there is big diversity throughout this hospital. I have worked in many departments and at many levels it's not common, but it exists."

When asked what the process of filing a harassment complaint was, 3 respondents had a vague idea of who to approach, signaling at "some" authority figure, while others did not know what they would do in such a situation.

"I have no idea. I was never trained or oriented. I am here for a 6-month rotation in total and am expected to come and do my work and then leave and not get too involved in hospital policies. I have no idea about formal processes or policies here."

Most respondents expressed their doubt about the effectiveness of the Act even if it was implemented. One respondent suggested that decision authority should lie with some one that cannot be influenced by either party, neither the victim nor the perpetrator. Another respondent commented on the general environment that might pose a hurdle in the effectiveness of the Act:

"There are two big cultures here: one is that West is best and one is that religion is best. Here, there is a big diversity of people and backgrounds; people come from all over the country and with different education and awareness backgrounds... there is something that may be acceptable for me and may not be acceptable or good for another person... Those who are pro-religious never like this type of [harassment] policy, even though our religion protects that thing [harassment of women]. We are suffering from a big problem ...... i.e. we are neither purely religious nor are we a purely secular society. Many things which are acceptable to many people cannot be acceptable by certain people. We cannot design this institution or other institutions or society in a purely uniform way."

Discussion:
Sexual harassment does not only impact an individual's physical and mental health but can also hinder vocational progress (15) and with the increasing incidence of cases it is important to improve strategies of prevention and awareness. It is evident that policies alone cannot lower workplace harassment (16); an amalgamation of efforts from various sectors can contribute to the reduction (17). A key element in to preventing female workplace harassment is by promoting awareness, be it through organizational training or the media addressing the issue and ways to tackle it. Awareness is not only meant for women to know their rights and protect themselves but also understand that they have the means to deal with the perpetrator through the Harassment Act of 2010.

However, linked to spreading awareness, is the important factor of complete implementation of the Harassment Act ensuring justice and protection. On various sites the Act has been termed as premature as it fails to instill fear of penalties and punishment among possible offenders (16,18). This lack of fear promotes hesitation on part of the victims to file or pursue complaints. Hence, it is vital for work organizations to conduct workshops and seminars to address harassment behavior and impart commitment to eradication of harassment through policy implementation (17). It is also essential for organizations to guide individuals who confront or how to communicate if they face such a problem at work; a council could ensure an unbiased manner of filing the complaint and providing emotional support.

Prevention of workplace harassment is a combined task for individuals, organizations and the government, where elimination lies in effective communication (and confrontation), awareness and protection and ensured implementation and justice.

Conclusion
The study shows that healthcare providers have poor awareness about the Harassment Act. Moreover, they do not recognize the need for it as they feel that it is not possible to implement it in true spirits. There is a need to remove such misconceptions with the managers taking leading role in this regard.

References:
6. Ilo.org. 'National Guidelines in the Philippines -Harassment in the Workplace'. Available from:


RUNN OF KACHCH EARTHQUAKE: IN THARPARKAR ITS ENVIRONMENTAL AND MENTAL HEALTH PROBLEMS; EXPERIENCE AND PUBLIC HEALTH ISSUE THEN AND NOW

Hussain Bux Kolachi¹, Mohammad Akbar Kazi², Bikha Ram Devrajani³

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Abstract

Background: Earthquakes often occur in volcanic regions and are caused there, both by tectonic faults and by the movement of magma in volcanoes. Series of tremors appear after the main tremor and is termed as aftershocks and always smaller in magnitude than main tremor. Aftershocks are smaller earthquakes formed as the crust around the displaced fault plane adjusts to the effects of the main shock. This survey was conducted to know the impact of earth quake on the mental physical and social heath and magnitude of earth quake related morbidity, mortality and economic losses in Tharparkar district after earthquake 2002.

Methods: Study was conducted at Taluka Hospital Nagarparkar and EDO Health Office Tharparkar during 26th January 2001 to 26th January 2002. A survey was conducted by distributing questionnaires to Medic and paramedics of affected First care level facilities and referral Care facilities who attended Health Management Workshop organized by Directorate General Health in earthquake affected district of Badin, Umerkot, Mirpurkhas Hyderabad and Thatta and Tharpakar who witness tremor of earthquake and treated patients and survivors.

Results: On 26th January 2001 earthquake hit 6 districts including Tharparkar. The earthquake originated in Runn-of-Katch a southern most border of Sindh and Pakistan. Estimated earthquake victims suffered from medical problem, fainting, injuries and deaths injured, deaths. There were 5661 victims who reached or brought to the near by health facilities and were provided medical care out of these 5661 total victims, 1504 (26.5%) were in Tharparkar, in Umerkot district 500 (8.83%), in Mirpurkhas 1040 (18.37%), in Badin 1563 (27.60%) this was the highest number of earthquake affectees while in Thatta 504 (8.90%) and in Hyderabad district 545 (9.62%). In a brief the total victims 5661 whose data is reported here further shows that there were 5500 (97.15%) victims who had medical problems, 110 (1.94%) were injured, 32 (0.56%) suffer fainting (un-consciousness') and there were 19 (0.33%) deaths due to earthquake injuries. Where Tharparkar and Umerkot had 2 deaths because of soft sand and straw made round roofs light roofs called 'Chura' which protected the people from tremors and injuries. While RCC buildings caused more deaths and more injuries.

Conclusion: The study concludes that earthquake caused sicknesses, injuries and deaths more where brick and RCC buildings were present while less damage occurred in Tharpakar where straw and wood made house structure were present.

Key Words: Earthquake, Richter Scale, phobia, disaster.

Introduction:) Earthquakes are basically geological activity hence wherever there are Tectonic conditions earthquakes will accrue. It is estimated that only 10 percent or less of earthquake's total energy is radiated as seismic energy(1). Where plate boundaries occur within continental lithosphere, deformation is spread out a over a much larger area than the plate boundary itself. This deformation caused by major irregularities in the fault trace (e.g. the "Big bend" region(2). Intra plate earthquakes take place when neighbouring plate touche each other and fallut line is created. Most of the earthquake are deep less than ten kilometer but. Earthquakes occurring at a depth of less than 70 km are classified as 'shallow-focus' earthquakes, while those with a focal-depth between 70 and 300 km are commonly termed 'mid-focus' or 'intermediate-depth' earthquakes. In subduction zones, where older and colder oceanic crust descends beneath another tectonic plate, deep-focus earthquakes may occur at much greater depths (ranging from 300 up to 700 kilometers) (3,4). These seismically active areas of
Earthquake swarms are sequences of earthquakes striking in a specific area within a short period of time. An example of an earthquake swarm is the 2004 activity at Yellowstone National Park.(5,6,7,8) Sometimes a series of earthquakes occur in a sort of earthquake storm, where the earthquakes strike a fault in clusters, each triggered by the shaking or stress redistribution of the previous earthquakes. Minor earthquakes occur nearly constantly around the world in places like California and Alaska in the U.S., as well as in Guatemala. Chile, Peru, Indonesia, Iran, Pakistan, The Azores in Portugal, Turkey, New Zealand, Greece, Italy, and Japan, but earthquakes can occur almost anywhere, including New York City, London, and Australia (9-11). Human impacts of earthquake may result into disease, injuries and deaths but others effects are lack of basic necessities, higher insurance premiums, general property damage, road and bridge damage, and collapse of buildings or destabilization of the base of buildings which may lead to collapse in future earthquakes. Earthquakes can also lead to volcanic eruptions, which cause further damages such as substantial crop damage. History tells human killing is paramount impacts of earthquake whherever and whenever it occurs.

Today, there are ways for protection and preparedness to protect the possible sites of earthquakes from severe damage, through the following measures: Earthquake engineering, Earthquake preparedness, Household seismic safety, Seismic retrofit (including special fasteners, materials, and techniques), Seismic hazard, Mitigation of seismic motion, and Earthquake prediction (9,10). Earthquakes in mythology and religion In Norse mythology, earthquakes were explained as the violent struggling of the god Loki. In Greek mythology, Poseidon was the god of earthquakes.

The USGS estimates that, since 1900, there have been an average of 18 major earthquakes (magnitude 7.0-7.9) and one great earthquake (magnitude 8.0 or greater) per year, and that this average has been relatively stable.) In recent years, the number of major earthquakes per year has decreased, although this is thought likely to be a statistical fluctuation rather than a systematic trend. More detailed statistics on the size and frequency of earthquakes is available from the USGS. Most of the world's earthquakes (90%, and 81% of the largest) take place in the 40,000-km-long, horseshoe-shaped zone called the circum-Pacific seismic belt, also known as the Pacific Ring of Fire, which for the most part bounds the Pacific Plate (14,15). Massive earthquakes tend to occur along other plate boundaries, too, such as along the Himalayan Mountains. Humans can cause earthquakes for example by constructing large dams and buildings, drilling and injecting liquid into wells, and by coal mining and oil drilling. Minor earthquakes occur nearly constantly around the world in places like California and Alaska in the U.S., as well as in Guatemala. Chile, Peru, Indonesia, Iran, Pakistan, the Azores in Portugal, Turkey, New Zealand, Greece, Italy, and Japan, but earthquakes can occur almost anywhere, including New York City, London, and Australia. With the rapid growth of mega-cities such as Mexico City, Tokyo or Tehran, in areas of high seismic risk, some seismologists are warning that a single quake may claim the lives of up to 3 million people. United Kingdom, for example, it has been calculated that the average recurrences are: an earthquake of 3.7 - 4.6 every year, an earthquake of 4.7 - 5.5 every 10 years, and an earthquake of 5.6 or larger every 100 years. (11,13). The number of seismic stations has increased from about 350 in 1931 to many thousand. The number of seismic stations has increased from about 350 in 1931 to many thousands today. As a result, many more earthquakes are reported than in the past, but this is because of the vast improvement in instrumentation, rather than an increase in the number of earthquakes trace of the fault, which may be of the order of few metres in the case of major earthquakes (13,15). Ground rupture is a major risk for large engineering structures such as dams, bridges and nuclear power stations and requires careful mapping of existing faults to identify any likely to break the ground surface within the life of the structure (16,17). Ground rupture is a visible breaking and displacement of the earth's surface along the Natural disasters include earth quakes. Disasters are ecological disruptions exceeding the adjustment capacity of affected community 1. Earth quakes are categorized as telluric and tectonic(18,20). As per forensic medicine sciences when human damage increases more than 10% than a disaster situation has emerged , the role of forensic in identification of personal characters like sex, age, race and cause of death & type of injury is important any ethical issue may be referred to forensic science expert. A earthquake hit Tharparkar desert and adjoining districts Mirpukhas,Umerkot Badin but also caused tremor in Thatta and Hyderabad on 26th January 2001 the epicenter was in Runn of Kachch having some part in Pakistan Sindh Province and some part in Ahmedabad Sate of India the earthquake hit Tharparkar and Badin at 8.15 am hours while Ahmedabad was hit 8.16 am hence origin was near Pakistan than India 15000 people were killed in Ahmedabad and other cities while only 14 deaths occurred in Tharparkar and adjoining districts this was due to sandy soil of desert and old straw made light roof houses called chaunras which resulted in less life damage while non sandy and rocky soil and pacca houses caused more life losses the 8th October 2005.
Earthquake in Kashmir caused 80,000 deaths due to rocky soil and pucca houses to document and understand the earthquake impacts in details. The study was designed in which the Geology Department of Karachi University and its SEG MITE organization, Baanhn Beli and Tharp Deep NGOs provided technical help in conducting and completion of the study.

**Methodology:** It was descriptive cross-sectional epidemiological study.

**Setting:** The study was conducted at Taluka Hospital Nagarparkar and EDO Health Office Tharparkar during 26th January 2001 to 26th January 2002. A survey was conducted by distributing questionnaires to medical and paramedics of affected First Care level facilities and referral Care facilities who attended Health Management Workshop organized by Directorate General Health in earthquake-affected districts of Badin, Umerkot, Mirpurkhas, Hyderabad, and Thatta. The study included those who witnessed tremor of earthquake and treated patients and survivors. The questionnaire was filled by them related to earthquake timing, tremor, damage to buildings and types of various health problems, presenting complaints, and injuries caused due to the earthquake. The questionnaire was completed by participants both male and female medical and paramedics. Only medical and paramedics who actually treated earthquake patients were included and uncooperative participants and legibly filled questionnaires were excluded.

**Table 1: Earthquake Time and Town**

<table>
<thead>
<tr>
<th>Time</th>
<th>Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:15 AM</td>
<td>Bannu of Kachra, Bhugra Moron, Tando Bago, Youssuf Shah, Noor Khoso, Badin</td>
</tr>
<tr>
<td>8:15 AM</td>
<td>Nagarparkara, Virawah, Adhigum, Kasbo</td>
</tr>
<tr>
<td>8:16 AM</td>
<td>Karachi, Thari, Talhar, Doda, T.G. Haidar, T.G. Ali</td>
</tr>
<tr>
<td>8:16 AM</td>
<td>Ahmedabad, Bhuj, Anjar, Bacoahao, India</td>
</tr>
<tr>
<td>8:20 AM</td>
<td>Kadhon</td>
</tr>
<tr>
<td>8:25 AM</td>
<td>Pangrigo, Maltaki</td>
</tr>
</tbody>
</table>

**Table 2: Showing Earthquake Intensity and Magnitude**

<table>
<thead>
<tr>
<th>District</th>
<th>Earthquake Tremor/Joits No 8 Richter Scale</th>
<th>Major Aftershocks Joits</th>
<th>Minor Aftershocks Joits</th>
<th>Total Tremor &amp; Aftershocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tharparkar</td>
<td>2</td>
<td>10</td>
<td>347</td>
<td>359</td>
</tr>
<tr>
<td>Umerkot</td>
<td>2</td>
<td>6</td>
<td>300</td>
<td>308</td>
</tr>
<tr>
<td>Mirpurkhas</td>
<td>2</td>
<td>5</td>
<td>200</td>
<td>207</td>
</tr>
<tr>
<td>Badin</td>
<td>2</td>
<td>3</td>
<td>200</td>
<td>205</td>
</tr>
<tr>
<td>Thatta</td>
<td>2</td>
<td>3</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>2</td>
<td>3</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Mean Value</td>
<td>2</td>
<td>4.2</td>
<td>206.7</td>
<td>211.2</td>
</tr>
</tbody>
</table>

Source: Daily Dawn Karchi 27th January 2001 and Our Survey Data
Table 3: Showing estimated victims, injured, deaths and fainting as result of earthquake in affected districts

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>VICTIMS/patients (No.%)</th>
<th>INJURED (No.%)</th>
<th>DEATHS (No.%)</th>
<th>FAINTING (No.%)</th>
<th>Total (No.%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tharparker</td>
<td>1560 (26.4%)</td>
<td>2 (0.03%)</td>
<td>2 (0.03%)</td>
<td>0 (0.00%)</td>
<td>1564 (26.56%)</td>
</tr>
<tr>
<td>Umerkot</td>
<td>500 (8.83%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
<td>500 (8.83%)</td>
</tr>
<tr>
<td>Mirpurkhas</td>
<td>1000 (17.66%)</td>
<td>32 (0.56%)</td>
<td>8 (0.14%)</td>
<td>0 (0.00%)</td>
<td>1040 (18.57%)</td>
</tr>
<tr>
<td>Badin</td>
<td>1560 (26.4%)</td>
<td>60 (1.00%)</td>
<td>3 (0.06%)</td>
<td>0 (0.00%)</td>
<td>1583 (27.06%)</td>
</tr>
<tr>
<td>Thatta</td>
<td>500 (8.83%)</td>
<td>0 (0.00%)</td>
<td>1 (0.01%)</td>
<td>0 (0.00%)</td>
<td>501 (8.90%)</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>500 (8.83%)</td>
<td>13 (0.22%)</td>
<td>5 (0.08%)</td>
<td>32 (0.56%)</td>
<td>545 (0.62%)</td>
</tr>
<tr>
<td>Total</td>
<td>5500 (97.15%)</td>
<td>110 (1.94%)</td>
<td>19 (0.33%)</td>
<td>32 (0.56%)</td>
<td>5661 (100%)</td>
</tr>
</tbody>
</table>

Source: District Health Officers and Our Survey Data from medics and paramedics who attended the victims.

Table 4: Showing type of physical and mental disorders reported by victims of earth quake and percentage of patients suffering from these symptoms

<table>
<thead>
<tr>
<th>No.</th>
<th>Physical and Mental Problem</th>
<th>Most Common/least common</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phobia</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Earthquake noise</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Running in Panic</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Deafness temporary</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Crying</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Insomnia</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Shock</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Depression</td>
<td>More Common</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Vertigo</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Loss of Sense</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Anorexia</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Fall on earth</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Painting</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Tree fall injuries</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Shelter less ness</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Numbness in Feet/Umerkot</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Low/High B.P.</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Water &amp; Eatable Shortage</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Stress</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Drug accessibility</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Depression</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Current Passed in Body</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Road Traffic Accident</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Chaikat Sudden awakening</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Dangerous Dreams/Horror</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>School going and Study problems in children</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Injuries</td>
<td>Less common/last common</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Shivering</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Snake bite / Fear</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Fractures</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Martial Relation disturbed</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Loss of Speech</td>
<td>Less common</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Pub</td>
<td>Less common</td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Showing comparative data of various earthquakes in Pakistan now and then with intensity at Richter scale and reported deaths from 1819 and 2001 to 2015

<table>
<thead>
<tr>
<th>Earthquake area</th>
<th>Month/Date of Year of Earthquake</th>
<th>Time of Earthquake</th>
<th>Richter Scale Intensity</th>
<th>Reported Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rann of Katch</td>
<td>26-1-2001</td>
<td>8.16 AM</td>
<td>8.9</td>
<td>14</td>
</tr>
<tr>
<td>Tharparker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ahmed Abad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azad-Jamu and</td>
<td>September 2005</td>
<td>8.56 AM</td>
<td>8.7</td>
<td>80000</td>
</tr>
<tr>
<td>Kashmir</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awaran Balochistan</td>
<td>24-9-2011</td>
<td>11.29 AM</td>
<td>7.7</td>
<td>828</td>
</tr>
<tr>
<td>Gilgit</td>
<td>10-10-2015</td>
<td>2:09 PM</td>
<td>7.6</td>
<td>220</td>
</tr>
<tr>
<td>Rann of Katch</td>
<td>16-6-1819</td>
<td>6.45 PM</td>
<td>8.2</td>
<td>1546(12084 Total Deaths)</td>
</tr>
</tbody>
</table>

Source: Red Cross Pakistan Report /Appeal No6.01 2001 and Wikipedia 2015

Results:

Table 1 shows the timing of earthquake as reported by medics and paramedics and national news paper the Daily Dawn, the earthquake hit 7 towns of Badin and 4 towns of Tharparker at 8.15 am while 4 towns of India were hit at 8.16 am showing epicenter in Rann of Katch near Pakistan side than Indian side however earthquake continued for 10 minutes till 8.25 in which Pangrio and Malkani town of Badin had the last jolt. Table 2 shows that there were 2 major tremors with 4.2 big aftershocks 206.7 minor after shocks giving mean value of 211.2 after shocks. Tharparker suffer highest number of aftershocks which were total 2 major tremor 10 major after shocks 347 minor aftershocks followed by Umerkot where 2 major tremor 6 major aftershocks 300 minor after shocks making total 308 tremors and after shocks. While Mirpurkhas had 207, Thatta 200, and Badin 205 total tremors and aftershocks. The mean value as per table show that there were 211.2 after shocks and tremors. Table 3 showing estimated victims, injured, deaths and fainting as result of earthquake in affected districts there were 5661 victims who reported to the near by health facilities and were provided medical care out of 5661, 1504 (26.5%) were in Tharparker, in Umerkot district victims number was 500 (8.83%), in Mirpurkhas number of victims was 1040 (18.37%), in Badin district victims were 1563 (27.60%) this was the highest number of earthquake while in Thatta 504 (8.90%) and in Hyderabad district 545 (9.62%). Table 3 also shows in n brief the total victims 5661 whose data is reported here further shows that there were 5500 (97.15%) victims had medical problems, 110 (1.94%) were injured, 32 (0.56%) suffer fainting (unconsciousness) and last there were 19 (0.33%) deaths due to earthquake injuries. Where Tharparker and Umerkot had 2 deaths because of soft sand and straw made round roofs light roofs which protected the
people from tremors and injuries. They are really earth
quake proof structures rest of 17 deaths occurred in
barrage area where brick structure and soil is non sandy
and hard . Highest injuries were in Badin (54.5%) out
of 110 total injuries and highest deaths were in
Mirpurkhas (42.1%) out of total 19 deaths this was
closed largest city to earthquake area of Katch and
had multiple story buildings. Table 4 showing that there
total 33 earthquake related problem 7 most common
symptoms and 26 other symptoms mostly mental health
problems multiple injuries deaths and fainting for which
rural and peripheral system was least trained and
experienced. Most of the building of rural health system
collapsed and became dangerous for sheltering staff
and patients. Study is exploratory epidemiological
needs more well organized studies to document
missing factors to be covered for disaster management
and earthquake in Future.Table 5 gives the data of
earthquakes in Pakistan and Katch from 1819 to 2015
in Pakistan which showed 8 earthquakes have occurred
causing death of 12084 people out this huge life loss
only 14 deaths happened in Tharparkar beyond doubt
sand of Thar proved earthquake resilient and protective
now and then as well Chaunra structure
of houses.

Discussion:
Our study had identified that the origin of earthquake i.e
epicenter was near to Pakistan side in Rann-of-Katch
earthquake started its tremor at 8.15 am and hit
Tharparkar, Badin first and it reached Indian side at 5:16
am exactly one minute after it hit Pakistani side the mean
figure of earth quake are 2 major jolts and 2.11.2 after
shocks during the duration of 8:15 am to 8:25 am this
fact is important as the earthquake was considered
Indian side more and media also reported as Indian
Katch rather than Pakistan i Rann of Katch earthquake
hence the Government of Pakistan must establish its
earthquake measuring center with richter scale in
Tharparkar and Badin (17). The magnitude of earth
quake was between 7 to 8 on Richter Scale which is High
level of earthquakes the same magnitude earthquakes
has occurred in Asia and America in the past (2,3).
The diseases, injuries and deaths pattern is also similar as
reported by United States Geological Surveys and other
studies also supports that training of Medics and
Paramedics working in rural health facilities of lower
Sindh and Tharparkar is inadequate to manage such
disaster like situation their capacity for earth quake
disease injuries and deaths be enhanced , the study is
exploratory and first of its kind which is a basic source for
further well designed and well funded studies (21). The
sand and old structure of house are safe than fancy so
called modern brick and RCC construction in urban
areas as Mirpukhas and Hyderabad had 13 out of 19
killed people due to earthquake because there were
mutitystory building while the Badin where also Paka
structure also present 60 (42%) out of 110 injuries
occurred while in Tharparkar 2 (1.8%) were killed and
also 2 (1.8) injured which shows modern construction
is done without considering earthquake factor because
injuries and deaths were 10 times more where high prize
and pakka structures were present like in Mirpurkhas,
Badin and Hyderabad (17). In Tharpakar and Umerekot
where old chunwra , wooden cum straw made structures
were present only the injuries and deaths were less than
3.6% Tharparkar is situated in earthquake zone (15).
The skill of staff and infrastructure of rural health
facilities is inadequate and needs special mental health
problems first aid long term management training and
medicines and supplies (21).

Conclusion:
The study concludes that an earthquake is a high
emergency situation and can cause diseases injuries
and deaths .Our urban houses are unsafe for
earthquake jolts. They are 10 times dangerous than old
chunwra/wooden and straw made structure/ houses in
Tharpakar. Rural health system manpower and
infrastructure is inadequate to deal with disaster.
Medicines, supplies and skill for earthquake response
are urgently required to be revamped and strengthened
Tharpakar Earthquake is not reported in mainstream
media and NDMA, PMDA and EERRA which needed
careful look for public health environm,ental and mental
health problems redressed and prevention now and
then.

Acknowledgment:
The Computer help of Asad Hussain Junejo, Forensic
Medicine, LUMHS and Doctor Jamil Ahmed Soomro of
Isra University and Health Services Academy
Islamabad for accepting the article for Oral
Presentation in December 2015 6th Annual Conferenve
is Acknowledged

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MANAGEMENT FOR POLYCYSTIC OVARIAN SYNDROME IN THE DEPARTMENT OF GYNECOLOGY & OBSTETRICS AT PAKISTAN INSTITUTE OF MEDICAL SCIENCES. ISLAMABAD

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Abstract

Background: Polycystic ovarian disease (Stein- Leventhal Syndrome) is a disorder in which multiple cystic follicles in ovaries produce excess androgens and estrogens. It usually comes to attention after menarche in teenage girls or young women who present with oligomenorrhea, hirsutism, infertility and sometimes obesity. This study has been conducted to assess different management options & level of compliance for polycystic ovarian syndrome.

Methods: This was cross sectional study conducted at Tertiary care Governmental Hospital of Islamabad (P.I.M.S) by interviewing female patients coming to Gynecology Department after the sample size calculation. The participants were selected on the basis of their presenting complaints and their age (13-44) and a positive diagnosis from the treating physician. A written consent was taken after proper approval of this study from ethical committee of P.I.M.S Islamabad.

Results: Total 139 patients were interviewed during this survey. The mean age of patients was 28. Most of the patients did not know about their disease but most of them were satisfied with doctors' attitude towards them. About 24 doctors including Faculty members, Post-graduate trainees & House Officers were interviewed who were strongly satisfied ($p=0.01$).

Conclusions: Gynecology Department of P.I.M.S is following international guidelines regarding management of PCOS patients to the best of their abilities despite limited resources and an ever-increasing patient load.

Introduction:

Polycystic ovary syndrome (PCOS) is an endocrine-metabolic disorder characterized by multiple hormonal imbalances, reflecting on a clinical presentation dominated by manifestations of hyperandrogenism, which generate short and long term consequences on female health (1). Among these, infertility is one of the most alarming associated morbidities (2,3). The prevalence of PCOS, using established ultrasound criteria, is significantly higher among women with RM (recurrent miscarriages) compared to those with an uncomplicated reproductive history. The prevalence of the disease is between 3-11% which is conditional on the population studied and the criteria used for its diagnosis (4). South Asian women phenotypic and metabolic profile with PCOS drives from a large database of an endocrine clinic which shows more severe symptoms and insulin resistance are found at younger age in south Asians with anovulation than Europeans (5). However, prolonged anovulation can lead to dysfunctional uterine bleeding which may mimic more regular menstrual cycles. The majority of PCOS patients have ovarian dysfunction, with 70-80% of women with PCOS presenting with oligomenorrhoea or amenorrhoea (6). Also, increased early clinical and subclinical markers of atherosclerosis seen in PCOS (endothelial dysfunction, impaired pulse wave velocity, increased carotid intimal & medial wall thickness, presence of carotid plaque and increased coronary artery calcification) are further exacerbated by obesity (7). The challenges to feminine identity and body image due to obesity, acne and excess hair, as well infertility and long-term health-related concerns compromise quality of life and adversely impact on mood and psychological well-being (8).

Treatment option/existing solutions, lifestyle change is first line treatment in an evidence-based approach in the management of the majority of PCOS women who are overweight (9). Furthermore, prevention of excess weight gain should be emphasized in all women with PCOS of either normal or increased body weight. As little as 5-10% weight loss has significant clinical benefits improving psychological outcomes (10). Evidence shows that lifestyle change with small achievable goals results in clinical benefits even when women remain in the overweight or obese...
range (11,12). Metformin has had an increasing role in PCOS management improving clinical features (ovulation, cycle regulation, and potentially hirsutism) with positive cardio metabolic effects. It is important to note that neither metformin nor the Oral Contraceptive Pills (OCP) is approved by most regulatory authorities specifically for PCOS (13). The OCP is indicated for contraception and metformin for the treatment of diabetes. However, both treatments are recommended by international and national endocrine societies and are evidence based. As a prelude to treatment, psychological features need to be acknowledged, discussed and counselling should be considered to enable a lifestyle change which is unlikely to be successful without first addressing the education and psychosocial issues of the patient. This research is unique in the way that no such study has been conducted in P.I.M.S before regarding the evaluation of different management options for PCOS.

**Methodology:** This was cross sectional study to conduct assessment of management of Polycystic Ovary Syndrome (PCOS) in Outpatient P.I.M.S. It was conducted in the Department of Gynecology & Obstetrics-Pakistan Institute of Medical Sciences (P.I.M.S) during three months (October-December 2015). Total 139 outpatients as registered cases at the P.I.M.S fulfilling the eligibility criterion (age 13-44) were selected randomly after calculation of sample size, taking confidence levels as 95%, anticipated population proportion 10%(from where incidence was taken), absolute precision was considered 5%. However, pregnant women and those with chronic diseases were excluded from the study. A Total of 24 doctors (37.5% House Officers, 37.5% Postgraduate trainees, 2.5% Senior Registrars & 16.6% faculty members) participated to tell about provided facilities at outpatient department. Both patients & doctors were interviewed with the help of questionnaires after taking consent.

**Results:** All respondents among patients were female, with median age of 26 (±7.43) years. Majority (90.24%) of patients was unaware of the disease & only (0.81%) of them had just heard of it. About (59.12%) were married & (40.88%) were single. Among married, 47.27% had children, 34 patients had history of miscarriages, 22 were unable to conceive. Most of the patients (65.68%) presented with complaint of menstrual irregularity, 14.6% due to hirsuitism & worsening complexion, 10.95% presented with inability to conceive and 7.3% with complaint of pain(abdominal & pelvic). Regarding Menstrual irregularity,(64.96%) had irregular cycles with normal bleeding, 13.87% had menorrhagia, 5.84% had amenorrhea & 3.65% had oligomenorrhea, a majority of patients (68.35%) felt severe dysmenorrhea which in 45.96% of cases was treatable with analgesics but relapsed in 18.1% cases. Only 36.69% cases had complaint of obesity and 55.47% develop acne (mostly during menstrual period). 21.58% patients had difficulty in breathing and 10.79% had positive family history. 61.03% had undergone ultrasonographic confirmation before they were surveyed. 20.74% rated doctor's attitude towards them as remarkable, 36.03% as good, 37.04% were satisfied & only 5.93% were unsatisfied. Only 1.50% underwent surgical intervention & 21.48% adopted lifestyle modification that was helpful in 37.58% cases. 77.7% were satisfied with their treatment, 80.6% were satisfied with information they were provided with. 80.6% knew about their disease from doctor, 1.44% from relatives & 0.72 % from internet.

Among the 24 doctors, House Officers (37.5%), Postgraduate trainees (37.5%), senior registrars (2.5%) and Faculty members (16.6%) responded. Demographic information showed that 100% of doctors were females and all of them were residents of Islamabad. 45% of the doctors go for symptomatic management and 35% consider all options (symptomatic, lifestyle modification, surgery) acceptable. 70% agreed with the act that PCOS patients present quite often. 85% said that patients are unaware of their disease. 65% agreed that infertility is the major presenting complaint, 15% considered dysmenorrhea as main complaint, 100% agreed that every patient should be diagnosed on the basis of pelvic ultrasound. 95% said that PCOS patients have raised androgens. 100% are satisfied with facilities provided at outpatient P.I.M.S and considered family history significant & 75% considered Metformin an ideal treatment (Table-1).

**Table 2: Questions asked from Doctors**

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>Responses by Doctors N=209</th>
<th>Strongly Agree [%]</th>
<th>Agree [%]</th>
<th>Disagree [%]</th>
<th>Strongly Disagree [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does doctors usually advise lifestyle modification to patients with PCOS?</td>
<td>65</td>
<td>35</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Do you see patients with PCOS quite often?</td>
<td>30</td>
<td>70</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Patients are already aware of the treatment administered.</td>
<td>0</td>
<td>15</td>
<td>85</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. Infertility is the major complaint of patients of PCOS.</td>
<td>35</td>
<td>65</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Commonly patients of PCOS present with dysmenorrhea.</td>
<td>5</td>
<td>15</td>
<td>85</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. Every patient with PCOS need Pelvic Ultrasound for diagnosis</td>
<td>85</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Patients of PCOS experience have raised androgens levels.</td>
<td>35</td>
<td>60</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. Family history is very important in PCOS</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
100% of the faculty members of the Department of Gynecology & Obstetrics strongly agreed with the fact that incidence of PCOS is increasing & unhealthy dietary habits are its major contributors. 66.7% strongly agreed and 33.3% agreed that reported cases of PCOS have increased with better diagnostic facilities. 50% thought that every PCOS patient has ovarian cysts but according to remaining 50%, its other way round. 25% considered PCOS a part of metabolic syndrome but 75% disagreed. 100% of them consider metformin as first line effective treatment after lifestyle modification.

Discussion:
As a prophylactic prevention, lifestyle change is an evidence-based approach in the management of the majority of PCOS women who are overweight. Furthermore, prevention of excess weight gain should be stressed in all women with PCOS of both normal and increased body weight. Weight loss has significant clinical benefits improving psychological outcomes as supported by similar other kinds of studies (14). After lifestyle medication & before going for contraceptive pills (OCP), preferred treatment in symptomatic patient is Metformin. It not only corrects insulin resistance but prevents the development of Diabetes Mellitus 2 in PCOS patients who are at greater risk to develop it. Similar studies show efficacy of Metformin (15). As depicted from opinions of doctors, generally, medical therapy is targeted to symptoms and should not be used as an alternative to lifestyle therapy in PCOS. The OCP (Oral Contraceptive pill) has long been used in PCOS to induce regular cycles (as most of the unmarried patients present with menstrual irregularity), protect the endometrium and treat hyperandrogenism. The OCP also reduces ovarian androgen production. Concerning data also states that the OCP can increase insulin resistance and worsen glucose tolerance, consideration should be given to cardiometabolic effects of medical therapy and low dose OCP preparations may be a preferable alternative, with similar efficacy and reduced cardiometabolic effects. Surgical management (through cyst aspiration and ovarian diathermy ) can cause ovulation in infertile patients as stated by other studies (16).

Conclusion: Study concluded that most of Doctors were treating the patients according to recommended guidelines and patients were found satisfied with their treatment.

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REPRODUCTIVE HEALTH SEEKING BEHAVIOR AMONG 15-25 YEARS AGED MARRIED WOMEN LIVING IN SLUMS OF ISLAMABAD, PAKISTAN

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Abstract

Background: Reproductive health problems have posed a major burden on the health system of Pakistan, especially among women living in urban slum. An estimated 340 million new cases of RTIs emerge each year, with 151 million in Asia. Without early diagnosis and accurate therapy, their complications severely compromise women's health, fertility, infant health and survival. The objective of this study was to gauge the prevalence of reproductive health problems and subsequent health seeking behavior adopted by young married women of slums.

Methods: A cross-sectional study was conducted in 2012 by interviewing 210 young women, after taking their written consent, living in slums of Islamabad. A pretested, piloted and validated tool was used, after translating in the local language Urdu, by trained data collectors. All the women aged 15-25 with at least one child were included in the study.

Results: Study reflected that there is a wide diversity among the prevalence of different reproductive health problems in young female slum dwellers. The awareness of antenatal care was universal along with high utilization and an overall under utilization of post natal care was reported. Knowledge of contraception was high with low current usage. The use of traditional contraceptive methods was negligible. High prevalence of stillbirth and induced abortion as compared to the women of rest of the country was noticed. Area of residence of respondents, culture beliefs and enhanced accessibility to health services determined care seeking patterns for most of the prevalent reproductive health problems. Among individual characteristics of young women, autonomy and decision making significantly shaped their reproductive health behavior. Age and educational level of the respondents and their spouses were found to be less influential determinants.

Conclusion: Study concluded that different reproductive problems like antenatal care, family planning, induced abortion and postnatal care are more prevalent among the young women living in slums of Islamabad.

Key words: Reproductive health, Slums, Women health, Behavior, Health seeking.

Introduction: According to WHO estimates, about 358,000 maternal deaths occur globally, with 99% of the deaths occur in developing countries (1). Most (87%) of maternal death occur in two regions of the world namely Sub-Saharan Africa and South Asia. Around 333 million cases of Sexual transmitted disease (STIs) occur worldwide with one third of the cases being of women less than 25 years of age (2). Fifty percent of infertility cases are caused by preventable causes such as STIs, unsafe abortions and complications during child birth. Although the use of contraceptive methods has increased worldwide in the last 20 years, total fertility is still high in developing countries, with large unmet needs. As a result, the induced abortions rate is on the rise.

Unsafe abortion claims 30% of maternal deaths globally (3). A poor living condition in underdeveloped and developing countries, along with mismanaged utilization of health services, contributes to poor reproductive health outcomes in women. Trends in maternal mortality in 181 countries, show annual decline rate of 1.3%, with 50% deaths occurring in six major countries of the world with Pakistan ranking third. The decline in maternal mortality is lowest in Pakistan as compared to other South Asian countries, except Afghanistan (4). In Pakistan one out of 89 women loses her life as result of maternal causes. Maternal Mortality rate of our country is 278 per 100,000 live births. However contraceptive prevalence rate is 29.6%, leaving one out of four women, whose contraceptives needs are not addressed. This is striking, when knowledge about contraception rose to 96%, revealing the requirement of comprehensive family planning program with demand and supply side imperatives. The induced abortion rate of 29 per thousand, leads to 890,000 induced abortions performed annually. Only 39% of deliveries are attended by skilled birth
attendants, 61% of women have one antenatal visit in their last pregnancy, along with postnatal service utilization rate of 43% only. We are a country with a median age at marriage of 19.1 years, which shows that half of the women are married before this age. These young women are more vulnerable to the adverse outcomes of pregnancy than their older counterparts. Infant mortality rate among the babies less than 20yrs is 115, as compared to 55 per thousand live births in mothers 40-45yrs of age. Knowledge about STIs among young women is 5-7% only (5).

Pakistan is the most urbanized country in South Asia, with 33% of population living in cities. Forty eight percent of the urban population resides in slums (6). Young married women of resource-poor settings in slums are more susceptible to adverse reproductive health outcomes. On account of their young age they undergo psychological and emotional changes as they go through child bearing and rearing. This study investigates the types of reproductive health problems and care seeking for the same by the young women residing in slum settings of Islamabad, the capital city of Pakistan. It also describes the socio demographic characteristics of the respondents.

Methodology

A cross sectional study was conducted in seven slums of Islamabad from April -July 2012 by interviewing married women, of 15-25years of age who had at least one child. However, women visiting the area and non-residents were excluded from the study. In all 210 young married women were included in this study based on the sample size calculation by using single proportion formula at 95% confidence interval, margin of error 10%, average household size 7.2, multiplier for non response rate which was anticipated at 10% and for design effect the calculated sample size was multiplied by 2. We used multi stage sampling technique. During the first stage we selected seven out of a total of 12 slums of Islamabad (study area). This selection was based on the time and resources feasibility, availability of gate keepers and sampling frame of capital development authority (CDA). In the second stage after identification of slums, proportional allocation of the calculated sample size to the identified slums, according to their population was done. Finally, through simple random sampling using CDA sampling frame households were identified. Before the data collection, three days intensive training was provided to 12 data collectors. The tool was developed after extensive literature search and examining the questionnaire of various household surveys conducted both locally and in other countries of the region. The translation in Urdu (local language) was done to make it more understandable and these questions were organized in logical order. Pre-testing of the tool, in slums, which were not included in the study, was done. After pre-testing, necessary changes were made to make the tool more understandable and acceptable to both the interviewers and the respondents. Ethical clearance was taken from the institutional review board of Health Services Academy Islamabad. Written consent was taken from the respondents after explaining the objectives of the study. There was only one refusal in our study, as one of the mother in law did not allow her daughter in law to participate. The major reason for low refusal rate could be, that the ten lady health workers (LHWs) and two Lady Health Supervisors, who collected the data, were already familiar with the respondents and enjoyed a good rapport with them. Also respondents were already discussing reproductive health problems with them. Another major reason possibly was that young women were given an opportunity to share in-depth their reproductive problems and their experiences.

All the information collected using semi structured questionnaire, was entered into SPSS version 16, after coding of variables. Statistical analysis was used to do the SPSS version 16. Descriptive analysis was followed by bi-variate analysis.

Results: Total of 210 respondents participated in our study. They were selected from seven different legal slums of Islamabad. Respondents from each slum area were selected in accordance with population of that particular slum. Our respondents came from diverse areas of Pakistan. Among respondents twenty nine different castes were recognized. Out of 210 respondents, 151(71.5%) were Christian and 59 (28.1%) were Muslims. 135 (64.3%) of the respondents belonged to extended families while 75 (35.7%) of the respondents were from nuclear families. Average members in a household, who were adults (more than 15 years of age) were 5, whereas those who were children(less than 15 years of age) were three. Mean age of the respondents in the study was 23 years (SD±1.92), while the mean age at marriage was 18 years (SD±2.7), and years since marriage, were on the average 5 years (SD±2.83).The marriage age was not affected by slum area, religion and residential structure. Regarding education of the respondents, the majority (37%) had no formal or informal education, followed by (29%) those who had 6-10 years of formal schooling. The mean age of the spouses of respondents in our study was 27 years (SD±4.1). The spouses were on the average four years older than respondents. Regarding occupation of the spouses 59% had private job, 20% were government employees, 9% were laborers while 5% ran their own businesses. 7.1% of the respondents had history of a previous stillbirth. About 60% of respondents who had stillbirth, had received antenatal care during pregnancy. Majority of stillbirths were delivered in public hospitals following by home deliveries.

91% of the respondents utilized antenatal care in their last pregnancy. Majority (76 %) had four and more visits. The average number of antenatal visits that...
a woman had in her previous pregnancy was three. Sixty seven percent of respondents utilized public hospitals, and 70% received care from doctors. However, 15% of women received prenatal care at home. Private sector hospital utilization was only 8.1% in our study. On the whole, 81% of the care was provided by skilled health professionals (which included doctor, nurse, midwife and LHV). Among non skilled health providers, Dai/TBAs were chief care provider. The average cost of single antenatal visit was Pak Rs 534 (SD±455.36).

Supplementation in pregnancy is important aspect of antenatal care, therefore women were asked about iron and calcium supplementation in previous pregnancy. Eighty five % of respondents received iron, while 84% received calcium supplementation. Double dose of Tetanus toxoid vaccination was given to 79% of the respondents. In our study 81% of the women delivered in health facilities where as 19% delivered at home. Among those who delivered in facilities, 64% of deliveries took place in public sector facilities, while 17% in private sector facilities. 85% of deliveries were conducted by skilled care providers which included doctors (75%), nurse (6 %), midwife (3 %) and LHV (0.5%). Remaining 16 % were assisted by non skilled care providers, which included Dai/TBA (12%) and relative/ friend (3.3%). Forty one percent of our respondents had postnatal care in their last pregnancy. Once again majority consulted skilled care providers (40%), while remaining consulted dai/TBA (2 %). The place of postnatal care was, public sector facilities in 31%, private sector facilities in 8.5%, while 2 % had postnatal check-up conducted at home.

During the preceding month, 33% of respondents were exposed to contraception message on television, 4 % on radio, while it was conveyed by other sources to 1.4%. On the whole 39% of respondents were exposed to birth spacing message in the preceding one month period, while majority were informed through television. Only 30% considered the message they had heard effective in persuading the couple to adopt contraception. Current users of contraception was on 40%. When inquired about the knowledge of family planning methods; 61% knew about condoms, 52% injectable, 51% pills, 26% IUCD, 17% female sterilization and 5% male sterilization were reported. The common reasons for not using contraception were not wanting to use (13%), afraid of side effects (11%), needed more children (9%), did not have knowledge (8%), husband opposition (5%) and pregnancy (5%). 32 % of the respondents reported to have heard of infection that could be transmitted sexually (other than HIV/AIDs). When asked about which of partners, had higher chances of contracting infection after sexual contact, majority (66%) lacked the knowledge. Hemorrhage (0.5%), irregular/heavy vaginal bleeding (2%), foul smelling discharge with high grade fever (1.5%), and retained parts of fetus (3%) were reported by others.

Only 3% of the respondents said that they actually thought of contraception after their abortion. Strong statistical significance association was found between the prevalence of stillbirth and religion of respondents (p= 0.005), slum area to which she belonged (p= 0.000), and age of woman (p=0.000).

Table 1: Variables associated with the utilization of Antenatal care

<table>
<thead>
<tr>
<th>Variables</th>
<th>Utilization of Antenatal care in Last pregnancy N=191</th>
<th>p value</th>
<th>Significance at 0.05* Highly significant at 0.001**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>Not allowed</td>
<td>50%</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>Accompanied</td>
<td>95%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alone</td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td>Living Standard index*</td>
<td>&lt;= 3 score</td>
<td>67%</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>4-6 score</td>
<td>91%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;=7 score</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>Availability of TV</td>
<td>Yes</td>
<td>88%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>73%</td>
<td>0.03*</td>
</tr>
</tbody>
</table>

* A composite index to measure the socioeconomic status was used (availability of electricity, safe water supply (piped), drainage system, refrigerator, radio, television, separate toilet separate kitchen and well constructed residential structure). Scale had three categories on the basis of possession of indexed variables three or less of index items were classified as having low living standard, four to six indexed items were classified as having average living standard and seven or more of indexed items were classified as having better living standard

Antenatal care utilization in last pregnancy was strongly associated with high score on living standard (p=0.000) and mobility of woman (p= 0.001). Thus women who enjoyed higher mobility had enhanced utilization of antenatal care (Table 1). Place and person providing antenatal care were strongly associated by slum areas of resident (p=0.000), mobility (P=0.001) and decision making power of respondents (p=0.001). Therefore, in households where women enjoyed increased freedom of movement to common places and where majority of decisions were taken by both respondents and their spouses preferred skilled care providers. Husband's occupation (p=0.000) had strong association with uptake of skilled care during delivery both in term of place and person who assisted the delivery. Respondents whose spouses were in government job preferred more public sector and skilled care providers as compared to others. Unemployment status of respondents' spouses resulted in higher (50%) proportion of deliveries conducted at home and by non skilled care providers. Another significant predictor of facility based delivery were features of access ability (p=0.001). In our study as distance from health facility increased, so did the proportion of home deliveries.
Although RTIs/STIs' awareness on the whole was low, strong association was found between RTIs/STIs awareness and slum area of residence (p=0.000), and accessibility to health facility (p=0.000). Only strong association was found between prevalence of miscarriage and slum area of residence (p=0.003).

Discussion: Health seeking behavior is shaped by factors which are operating at individual, couple, family and community level. These factors significantly influenced the reproductive outcomes and hence shaped the health seeking behavior of respondents in this study. Antenatal care is necessary for monitoring of maternal and fetal health during pregnancy, along with timely reorganization and treatment of any pregnancy related problem. Utilization of antenatal care by women, of the slum areas was high. In study conducted in slums of Mumbai, India institutional care seeking was high (80%), but as opposed to our study, preference of private sector was found (7).

In our study, women of Christian faith had more complaints of problems as compared to Muslim women. Respondents' educational level did not influence most of reproductive health variables in our study. One explanation was the strong cultural influences of the respondents surpassed the educational influence, and stood as most influential factors as seen in study conducted across six African countries.

The fact that majority of women saved for their delivery, can be utilized as valuable background information for successful launching of any pre-paid health financing scheme. This is especially relevant, as we in our study, represented slum dwellers who belonged to poorest quintiles of our society. Any scheme to reduce out of pocket expenditure saves them from catastrophic health expenditure. The home deliveries according to Pakistan Demographic and Health Survey (2012-13)(PDHS) were 60% which was five times higher than our study. Other studies reveal that institutional deliveries in slums of Dhaka (Bangladesh) and Solapur (India) were 20% and 9% respectively (8,9). Therefore, the slums of our study had better delivery practices as compared to slums of the rest of country and of neighboring countries. Post natal period extends from immediately after the birth of baby to forty five days afterwards. Significant maternal and neonatal morbidity as well as mortality is attributable to this period, especially the first twenty four hours after delivery are very crucial for both mother and child. Postnatal care provides an excellent opportunity of educating the mother about neonatal health and birth spacing during this period. Postnatal care utilization in our study was 42%, which was far less than antenatal care, however it was equal to the utilization rate as given in the PDHS. In a study conducted in the slums of Delhi, India postnatal utilization was lower than antenatal care(16% against 76%) (10). This is similar to the trend of underutilization of post natal care as seen in our study.

There was not much difference between the ever use of contraception in our study and the women of the rest of the country. However our respondents exhibited less awareness as compared to the rest of the country (70% vs. 90%). Current usage of contraception on the other hand was 40% as compared to 30% in the rest of country indicating higher usage of contraception by young slum dwellers. However in study conducted in Calcutta, India current use of contraception among women residing in slums was found to be lower than non slum dwellers (11).

The induced abortion was reported by 4% of respondents, (42/1000 women), higher than the 22/1000 women estimate of WHO for our region (12). Increased abortion has association with low current usage and preference of a method, which has high failure rate. The same reasons were identified in our study; only 40% respondents were currently using contraception and among current users 65% preferred condom, method failure being the highest for condoms.

Conclusions: The health seeking behavior for reproductive health problems was shaped by a variety of background characteristics of the respondents. Family characteristics along with the accessibility to health care emerged as strong predictors of reproductive health seeking behavior of young women of slums. The socio-ecological environment of a particular slum area, religious beliefs of respondents, ease of access to care, were decisive forces behind the health-care seeking pattern of a majority of reproductive health indicators.

References:


KNOWLEDGE AMONG GENERAL PRACTITIONERS REGARDING MANAGEMENT OF LEISHMANIASIS IN DISTRICT JHELUM, PAKISTAN

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Abstract

Background: Leishmaniasis is a parasitic disease that is classified as Neglected Tropical Disease. It is found in parts of the tropics, subtropics, and southern Europe. It is estimated that at least 14 million people globally are currently infected by Leishmania parasites in 82 countries. Leishmaniasis is often referred to as group of diseases because of the different spectrum of clinical presentation, which range from small cutaneous nodules to gross destruction of mucosal tissue.

Methods: This study was conducted to assess the knowledge about the disease and its control measures which was in practice to combat leishmaniasis in district Jhelum of Pakistan. The data was collected from the doctors available at hospitals. The numbers of doctors working was 94 and among them 74 were found available to give responses.

Conclusion: Our study underscores the policy importance of availability of anti-leishmanial drugs at health care settings help to eradicate the disease in Pakistan.

Key words: Leishmaniasis, Knowledge.

Introduction:

Globally there are an estimated 2 million new cases and 70,000 deaths of Leishmaniasis have been reported each year. However, about 350 million people are at risk of infection (1). Leishmaniasis is one of the major infectious diseases affecting the poorest regions of the world and is often referred to as group of diseases because of the different spectrum of clinical presentation, which range from small cutaneous nodules to gross destruction of mucosal tissue. Despite its increasing worldwide incidence, cutaneous Leishmaniasis has become one of the so-called neglected diseases, with least interest by funding institutions, public health departments, and professionals to implement activities to research, control and prevention of the disease (2). The transmission of cutaneous Leishmaniasis may be zoonotic or anthroponotic (3). Only infected animals such as rodents or dogs in many geographic areas along with sand flies establish the disease cycle, called zoonotic cutaneous Leishmaniasis (4).

Leishmaniasis was reported from Pakistan in 1960 for the first time. Initially it was limited to the northern mountainous region, but now it is widely spreading all over the country. Pakistan is a tropical country situated in the north-west of South Asia, sharing borders with China, Afghanistan, Iran and India. Incidentally, all these neighboring states are also endemic for the Leishmaniasis (5). In Pakistan, both VL and CL are endemic; and two types of CL, zoonotic CL and anthroponotic CL are reported endemic in different parts of the country. In one study, the isolated parasites from the cutaneous lesions of 13 patients were typed as L. tropica; and it was concluded that anthroponotic cutaneous leishmaniasis is caused by L. tropica in Pakistan. Later, the VL was reported in the 10 children between 2 to 10 years at DHQ Hospital, Timergara district Dir, KPK. The disease affects some of the poorest people on the planet, and is associated with malnutrition, population displacement, poor housing, a weak immune system and lack of resources. Leishmaniasis is linked to environmental changes such as deforestation, building of dams, irrigation schemes and urbanization. Transmission cycles are adapting to peridomestic environments and are spreading to previously non-endemic areas as a result of urbanization and deforestation with domestic animals as potential reservoirs (8). Most common Risk factors of disease include, age, design of the houses, sex and material used in construction and presence of domestic animals (9). Leishmaniasis is endemic in Pakistan and a number of out breaks have been reported from all the
provinces including AJK. Recent outbreak in Sohawa, a tehsil of district Jhelum is an initiative to carry out the research study on Leishmaniasis (10). So the present study was carried out in that area to assess the control measures conducted by the health care providers against Leishmaniasis. Finding of the study will help in providing evidence based information regarding presently used practices and control measures which will be helpful for further improvement to control and eradicate the disease. The aim of the study is to prevent the outbreak of the Leishmaniasis in the area. The objectives of the study are to assess the control measures to combat Leishmaniasis and to assess the knowledge and the practices used to minimize the disease status.

Methodology:
A cross sectional descriptive study was carried out. Considering the fact that the study design is cheap and requires less sources, with no follow up and gives the snapshot and help us predicting an association with the given factors. Thus the study was conducted as a cross-sectional study. In this study doctors working in district Jhelum hospitals were included to conduct research. The duration of study was 2 month from April 20, 2015 to June 20, 2015. Structured questionnaire was built in with the questions regarding to the socio demographic factors, disease prevention, its transmission and control measures. The questionnaire was designed to assess the level of knowledge and control responses to combat resurgence, emergence and outbreak of Leishmaniasis. An interview based approach was used to collect the data from the respondents. All responses were recorded in a structured questionnaire. The sampling procedure adopted in this study was convenience sampling. Instead of selecting all doctors, responses were obtained from the doctors available at District headquarter hospital and two Tehsil headquarter hospitals and 5 randomly selected BHUs. The sample size was 94, which was the number of doctors working in research area. Using convenience sampling technique 74 respondents were found available to fill up the questionnaire. By 10% increase 74 were included in the study. Data was recorded on a pre-designed structured questionnaire which was analyzed using SPSS version 20 for windows. Before analysis the questionnaire was weighted at least twice against the database by the investigator for accuracy. Any error found was corrected before the actual analysis. Descriptive statistics was performed. The available doctors in hospitals of the district Jhelum will be included in the inclusion criteria. The officers on leave were included in the exclusion criteria. The ethical approval from an internal review board of the Health Services Academy will be obtained to conduct the study. Afterwards, permission from district health office of Jhelum will be obtained. Verbal/written consent will be obtained from the persons before filling a questionnaire.

Results:
Total sample size estimation was 94 taking the case of Leishmaniasis in district Jhelum as Prevalence. A questionnaire was developed and distributed in the target population (which is doctors in district Jhelum) Due to time constraints and availability of doctors' total 74 questionnaires was filled. The results derived from those 74 questionnaires are as follows.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sub variable</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>male</td>
<td>74.7</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>24.0</td>
</tr>
<tr>
<td>Marital status</td>
<td>Single</td>
<td>29.3</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>68.0</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>1.3</td>
</tr>
<tr>
<td>Highest education level</td>
<td>MBBS</td>
<td>78.7</td>
</tr>
<tr>
<td></td>
<td>FCPS</td>
<td>20.0</td>
</tr>
<tr>
<td>Current occupation</td>
<td>Government employee</td>
<td>94.7</td>
</tr>
<tr>
<td></td>
<td>Self employed</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Private employee</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Table 1: Demographics of target population

Results showed that the demographics of the targeted population which comprises of 74.4% of male and 24% of female. Among them 68% are married and 29.3% are single.78% having the highest education level MBBS and 20% having FCPS. Only a minor percentage is of self-employed and private employee, 94% having current occupation as Government employee. The targeted population was the doctors of public sector of district Jhelum.

The results shows that when asked about general information about Leishmaniasis 97% were knew the disease and its epidemic were in their knowledge. Only 1% doesn't know about the disease and never heard of its epidemic.60% of the targeted population described nodules and papules as symptoms of the disease and 37% described redness and itching as symptoms. When asked about is this disease is contagious 96% replied, it is contagious and 3% said it is not contagious. Among them 93% were of the opinion that disease is treatable and 2% said that non treatable. When treatment mode were asked the results shows that 53% said that it can be treated through injections and 37 said that disease can be treated through tablets.8% of the opinion that placebo is the treatment of the disease.

Below in the Fig 2 the graphical representation described the general information about the knowledge about the disease, symptoms of the disease and its treatment modes. Majority of the targeted population knew about the disease and its epidemic. Treatment modes of the disease vary regarding that the treatment
can be done through injections and tablets while a little percentage of the placebo treatment also exists. Fig 2 shows that only 2% did not know that either the disease is contagious or it can be treatable. 1% of the population did not about the symptoms of the disease.

Table 3: Disease transmission

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sub Variable</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the severity level of the disease</td>
<td>Disfiguring</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>Fatal</td>
<td>57.3</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>30.7</td>
</tr>
<tr>
<td>What are other factors important for disease (reservoir)</td>
<td>Dogs</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Rodents</td>
<td>53.3</td>
</tr>
<tr>
<td></td>
<td>Human</td>
<td>24.0</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>9.3</td>
</tr>
<tr>
<td>How do people get this disease</td>
<td>Mosquito</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Fly</td>
<td>86.7</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
<td>5.3</td>
</tr>
<tr>
<td>What are the breeding sites of vector</td>
<td>Water</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Animal dung</td>
<td>70.7</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
<td>18.7</td>
</tr>
</tbody>
</table>

Results showed the severity level of the disease, its reservoir, mode of transmission and the breeding sites of the vector is elaborated. Disfiguring, Fatal and Normal, these three level of severity were asked and regarding these severity level, 10% said that disease severity level is disfiguring. 57% said that disease could be fatal if severity level increases while 30% said that disease has a normal severity level. In disease transmission reservoir role could not be ignored. When asked about the reservoirs of the disease 12% said dog could be a reservoir while 53% said that rodents could be a reservoir. Human could be reservoir 24% of the targeted population were of the opinion and 9% did not knew about the reservoir of the disease.

Leishmaniasis is a vector borne disease and vectors plays an important role in its transmission. 86% said that fly is the main vector responsible for the transmission of Leishmaniasis and 6% said mosquito could be a vector of the disease. While 5% did not knew about the vector of the disease. 18% did not knew about the breeding sites of the vector and 70% said that animal dung is the breeding sites of the vector and 18%did not knew about the its breeding sites. In Fig 3 a graphical representation through a pie chart explained the disease transmission, its reservoir, mode of transmission and the breeding sites of the vector.
Results showed that 10.7% severity level is disfiguring, 57.3% severity level is fatal, 30.7% severity level is normal. 12.0% reservoirs are dogs, 53.3% reservoirs are rodents, and 70.7% reservoirs are humans. 6.7% disease transmission is by mosquitoes, 86.7% is by fly and 5.3% is by some idiopathic cause.

Results showed that 86.7% vector is controlled by insecticide spray. 2.7% even can't kill the vector. Fly bite can be prevented by repellents 36.0%, 13.3% and 49.3% respectively. Moreover 96.0% people need to prevent from disease. Results showed that 94.7% is necessary to treat the disease. 52.0% is contagious that's why it is necessary to treat the disease. 52.0% it is contagious to treat the disease while it should be treated with medicine. 96.0% it is advised to use bed nets where as 96.0% it is advised to spray insecticides in animal sheds/living room.

Results showed that 92.50% nodules, redness, itching occurs whereas treatment is injections mostly. Most of them knew about cutaneous Leishmaniasis.

**Discussion**

The results shows that when asked about general information about Leishmaniasis 97% were knew the disease and its epidemic were in their knowledge. Only 1% doesn't know about the disease and never heard of its epidemic. 60% of the targeted population described nodules and papules as symptoms of the disease and 37% described redness and itching as symptoms. When asked about is this disease is contagious 96% replied, it is contagious and 3% said it is not contagious. Among them 93% were of the opinion that disease is treatable and 2% said that non treatable. When treatment mode were asked the results shows that 53% said that it can be treated through injections and 37 said that disease can be treated through tablets. 8% of the opinion that placebo is the treatment of the disease. Similar results came from the study which shows the knowledge, attitude and practices of people in south Iran (10).

Most of the targeted population knew about the disease and its treatment modes was also assessed. Majority of the targeted population knew about the disease and its epidemic. Treatment mode was also assessed. According to results, 10.7% severity level is disfiguring, 57.3% severity level is fatal, 30.7% severity level is normal. 12.0% reservoirs are dogs, 53.3% reservoirs are rodents, and 70.7% reservoirs are humans. 6.7% disease transmission is by mosquitoes, 86.7% is by fly and 5.3% is by some idiopathic cause (7). Results showed that 92.50% said nodules, redness, itching occurs whereas treatment is injections mostly. Most of them knew about cutaneous Leishmaniasis. Similar study conducted with the result of Poor knowledge of the respondents about the disease and breeding sites of the vector underscores the need for health educational campaigns if the elimination program is to succeed. (9). Results showed that 94.7% said it is necessary to treat the disease while 52.0% said it is contagious that's why it is necessary to treat the disease. 52.0% said it is contagious and to treat the disease it should be treated with medicine. 96.0% said it is advised to use bed nets where as 96.0% said it is advised to spray insecticides in animal sheds/living room.

A similar study conducted in Bagh AJ & K where Mostly respondents (70%) were not reporting neither notifying cases of cutaneous leishmaniasis. About 70% of the respondents were known to the first and second line responses (8).

**Conclusions:**

Study concluded that general practitioners were not following the proper guidelines for treatment of Leishmaniasis. However, availability of anti-leishmanial drugs at health care settings helps to eradicate the disease. WHO has developed new strategies for prevention and control that emphasis integrated vector management as an approach that reinforces links between health and environment.

**References:**


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