ETHICAL ISSUES ENCOUNTERD BY HEALTH WORKERS IN TREATING SPUTUM POSITIVE CASES OF TUBERCULOSIS

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ABSTRACT

Objective: To ascertain ethical issues coming across health workers in sputum positive cases of tuberculosis. **Methods:** Cross-Sectional study was conducted during July 2015 at Institute of Chest Diseases Kotri Jamshoro &Institute of Chest diseases Ojha Campus Karachi in the Sindh Province of Pakistan, and comprised of Health workers i.e Doctors, Nurses and Dispensars who were working in the tuberculosis treatment centres. Data was collected through structured questionnaire and was analyzed through SPSS version 16. **Results:** Participants expressed that they encountered ethical issues such as autonomy (Independence in decision), treating patients for prolonged period without willingness of the patients and workers reported that they had inadequate financial incentives at Tuberculosis hospitals. 59.1% amongst male disagreed that they didn't get training, While 40.9% female disagreed that they had not got any training regarding tuberculosis.50% of nurses had no understanding about medical risks associated with tuberculosis. Amongst doctors 50% were agreed and 50% were not agreed regarding medical risks with tuberculosis..**Conclusion:** The study results showed that health workers are at increased risk of getting the disease and they were not satisfied with the measures taken to them in the tuberculosis hospitals. Moreover, they said that they encountered ethical issues in terms of autonomy of the patient by treating prolonged period without their willingness. Study results suggested that participants had little knowledge about ethics and have no concept regarding the ethical principles. Study revealed that all the participants' nurses, doctors and dispensars were equally facing ethical dilemmas/issues. Qualification and Gender has no relationship in terms of encountering ethical issues. In exception to this the workers had not undergone for tuberculosis control programmes that also can be responsible for creating ethical dilemmas.

Key words: Autonomy, DOTS, Ethics, Confidentiality, Latent Tuberculosis

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INTRODUCTION

Tuberculosis (TB) is still an important infectious disease today. It kills approximately 2 million people each year. It can be estimated that between the years 2002 and 2020 inclusive, approximately 1000 million people will be newly infected. Over the same period, according to available information over 150 million people will become sick, and 36 million will die from TB, if control of the disease is not further strengthened [1].Tuberculosis is a highly infectious airborne disease which is transmitted via droplets (Coughing and sneezing and spitting) of people infected with active tuberculosis, a patient's cough, sneeze or spit can be infectious and can be life threatening to those in close contact, especially individuals in continuous contact with the infected patients [2].The prevalence of TB among close contacts of infectious patients can be about 2.5 times higher than in the general population[3].An individual with active TB can be contagious for a long period of time and infect many other people. The consequence of transmission to others can be very dire; with significant morbidity to infected persons [4].Globally tuberculosis control is failing. The World Health Organization (WHO) recently called this public health threat a global emergency [5].Transmission occurs often through casual contact from individuals who have pulmonary disease. Although there is much that is uncertain regarding the infectiousness of this ancient disease, we know that those who are smear-positive, that is who have organisms of Mycobacterium tuberculosis visible in stained respiratory secretions; are considerably more infectious than those who do not [6-7].Tuberculosis (TB) is a top infectious disease killer worldwide. Tuberculosis is curable and preventable.TB is spread from person to person through the air.When people with lung TB cough, sneeze or spit, they propel the TB germs into the air. A person needs to inhale only a few of these germs to become infected. About one-third of the world's total population has latent TB, which means people have been infected by TB bacteria

but are not (yet) ill with the disease and cannot transmit the disease. People infected with TB bacteria have a 10% lifetime risk of falling ill with TB. However, persons with compromised immune systems, such as people living with HIV, malnutrition or diabetes, or the people who use tobacco, have a much higher risk of falling ill. When a person develops active TB disease, the symptoms (cough, fever, night sweats, weight loss etc.) may be mild for many months. In 2013, over 9 million people fell ill and about 1.5 million people died of tuberculosis (TB). Although there have been some major achievements in controlling TB, it remains crucial health threat, in particular to the most Vulnerable populations in the developing world. Prevention, care and control of TB raise not only technical, but also important ethical and policy issues that need to be adequately addressed. For instance, recent cases of involuntary detentions of people with TB in several parts of the world have brought up the question of, how to balance individual rights and liberties against the protection of public health [8].Tuberculosis is a dangerous airborne disease. Thought to have once been eradicated and isolated to third world countries, TB is once again gaining prominence as a deadly communicable disease. working to define a nationally set of guidelines, protective measures and enforcement measures to protect workers from TB and control its spread.Although education, increased infection control, and vigilance (on the part of health care providers) have somewhat delayed the spread of TB.This disease is strong and looking for a host in individuals with the depressed immune systems[9]. It is believed that health workers have a duty despite having risks to their health. Their duties are reflected by professional ethics which are written with some degree of strength. Facing dangers associated with caring for infectious patients is arguably the part of a health worker's job. Someone argue that the duty to care is based on a social contract. Society provides privileges by way of exclusive training to health workers but it then expects health workers to provide health care as a means of compensation [10]. Health care workers have an ethical obligation to care for their patients, even if doing so, involves some degree of risk. However, they should not be expected to assume risks that result from inadequate conditions to provide care. Governments and health care institutions must provide the necessary facilities ensure for a safe working environment [11].

Governments have an ethical responsibility to provide free and universal access to diagnose the adequate treatment of TB. This obligation is grounded in their duty to fulfill the human rights to health. Not only does TB treatment significantly improve the health conditions of individuals, stopping the spread of a highly-infectious disease but also benefits the broader community. It is crucial that patients should be engaged as partners in the treatment process, respecting their autonomy and privacy. If many patients have problems with adherence, this identifies the system has failed in providing a person-centered approach. Health care workers have an ethical obligation to care for their patients. Even if doing so, involves some degree of risks..Governments have an ethical responsibility to provide free and universal access to diagnosis and adequate treatment of TB. This obligation is grounded in their duty to fulfill the human rights to health. Autonomy means independence in making the decision regarding the self [12].The individualistic approach to "autonomy" places primary emphasis on liberty, privacy and informed consent of individual persons in the face of a health intervention carried out by other parties [13]**.** One central ethical problem concerning TB control consists of balancing the patient's rights and autonomy with the protection of the public's health [14].Some individuals might assert that ethics "is about appealing and aspirational standards, whereas responding to actual behavior and trying to change it". Nevertheless, the medical community must respect the concept of ethical obligation and has an intrinsic duty to inform the patient, under most circumstances, when potential Communicable diseases, exposure is possible [15].Ethical principles still guide the health care providers, when providing medical services to a patient. Medical ethics are what we believe is good and bad, right or wrong about medicine. While case law continued to assess moral and legal obligations of the health care providers, the principles of right and wrong, beneficence, and nonmaleficence have stood the test of time[16]. The Principle of Beneficence; the principle of beneficence as "requiring the health care workers to help, to do good or otherwise to improve the health status of the patients.

Objectives:.1)To note the possible ethical issues coming across health workers to sputum positive cases of tuberculosis.2).To observe which preventive measures are taken by health workers in treating tuberculosis 3).To assess the possible risk level(In terms of available facilities) encountered by health professionals in looking after sputum positive cases of tuberculosis.

LITERATURE REVIEW

Study of public health nurses in Louisiana reported ethical conflicts in the areas of confidentiality; informed consent, conflict of interest, and whistle-blowing arise while treating TB patients. A study conducted in India revealed that doctors treating tuberculosis encountered dilemmas, the doctor struggled to find a balance between meeting the obligations of the DOTS (Directly observed treatment short course program and meeting the needs and expectations of the patients[17].A study conducted in Tokyo Japan on protecting the rights of individuals with tuberculosis that discussed about whether the health personnel's could restrict the human rights of non cooperative TB patients. Although the patients' human rights must be protected, we also have to protect the human rights of people who may receive TB infection. The study also proposed that the health workers need some legal intervention for few cases who cannot continue hospitalization [18].

A survey study was also conducted on nurses in

Cape-Town South Africa; the study revealed that Nurses expressed concerns about the possible risk of TB transmission to the both patients and the staff. The study has obtained the experiences of ward nurses concerning multiple factors influencing TB infection prevention and control practices [19]. A survey study was conducted in Puerto Ricoamong the specialist and infectionologist that revealed, non-adequate facilities and lack of use of protective equipment was reported in treating tuberculosis. The results of this survey are concerning regarding educational and safety policies of our professionals and institutions in the country [20]. A cross-sectional survey was conducted in 2005 in China. Findings of the study revealed that TB infection control in TB centers in Henan, China, appears to be inadequate and the prevalence of latent tuberculosis infection (LTBI) and TB disease among health care workers was high. TB infection control practices in TB centers should be strengthened in China, including administrative measures, renovation of buildings, and use of respirators and masks [21]. A survey study was carried in Nigeria, keeping in view the National TB programme of Nigeria, health personals were assessed regarding knowledge about issues that exist in the clinical setting, Results revealed that improved knowledge of health workers on the current issues concerning the disease, including the National guideline, is important for effective disease control[22]. A survey study was conducted in urban Sindh Pakistan regarding the effectiveness of directly observed treatment short course(DOTS),study concludes that the public health care system in Pakistan lacks even the basic requirements for an effective TB control program, that needs to be integrated with rest of the health care delivery system in the country[23].

A cross sectional study was also conducted in India .This study looks at the utility of notification and the ethical issues posed by it from a public health practice perspective. This study suggested that in the absence of proper treatment, diagnosis will pose more ethical problems[24]. A study was conducted in India in 2014 on the implication of ethics in treating tuberculosis. The author suggested that how the principles of ethics such as respect for other, beneficence and justice can be effectively applied in the revised tuberculosis control program of India. Authors of this research proposed that ethical framework may be used to make an ethical evaluation of other health programs, since, it will bring overall benefits to whole society[25]. A survey study was also carried out in Ottawa in 2011 ,study reviewed health care worker's obligations to perform their duties in treatment diseases like tuberculosis. This article explores the ethical obligations as well as reciprocal rights of health care providers who are carrying for patient with tuberculosis[26]. A guideline proposals were published by Joint Tuberculosis Committee of the British Thoracic Society in 2000 and the following areas are discussed and recommendations made where appropriate: (i) public health law in relation to tuberculosis; (ii) the organizational requirements for tuberculosis services; (iii) measures for control of tuberculosis in hospitals, including segregation of patients; (iv) the requirements for health care worker protection, including HIV infected health care workers; (v) measures for control of tuberculosis in prisons; (vi) protection for other groups with potential exposure to tuberculosis; (vii) awareness of the high rates of tuberculosis in the homeless together with local plans for detection and action; (viii) detailed advice on contact tracing; (ix) contact tracing required for close contacts of bovine tuberculosis; (x) management of tuberculosis in schools; (xi) screening of new immigrants and how this should be performed; (xii) outbreak contingency investigation; and (xiii) BCG vaccination and the management of positive reactors found in the schools programme [27]. A review study was also conducted in New York in 1994 that assessed the risks for the workers who were performing their duties in hospitals regarding the prevention and treatment of tuberculosis and assessing level of risk to health care workers. In this study the focus was on suggesting guidelines in achieving complete protection from tuberculosis for persons working in hospitals and clinics will remain elusive until the rapid diagnosis of pulmonary tuberculosis is possible. Standard infection control measures have been documented to decrease the hazards to nurses, physicians, and other health care personnel[28]. A study conducted in Malawi in Sub-Saharan in Africa in 1993 and 1994, study was carried out to examine the process of diagnosis and treatment of smear-positive pulmonary TB patients in Queen Elizabeth Central Hospital, Blantyre, Malawi, and the incidence of TB in nurses working in specific departments of the hospital was analyzed. The results indicate the importance of finding simple measures in resource-poor countries to improve the diagnosis and treatment of TB in hospital patients in order to decrease the risk of nosocomial TB transmission [29].A study was also carried out in November 1996 through March 1997,at a university hospital in Lima, Peru among health care workers having active pulmonary tuberculosis (TB) was detected in 44 health care workers (HCWs),furthermore, study assessed magnitude of the outbreak and determine risk factors for occupational Mycobacterium tuberculosis transmission[30].

METHODOLOGY

Study Design: Descriptive cross sectional study **Setting:** Two tertiary care hospitals of Tuberculosis, in Kotri District Jamshoro (Institute of chest disease) and Institute of chest diseases OJHA campus Dow university Hospital Karachi **Duration of study:** Six months. **Sample size:** Total 100 health personnel (Doctors, nurses, and Dispensars) **Sampling technique:** Simple Random sampling **Inclusion**

Criteria: Health workers (Doctors, nurses and Dispensars) who are cooperative and willing to participate in the study are included in the study. No age group was estimated/fixed. Participants of all age group were allowed in participation of the study. **Exclusion Criteria:** Those who are unwilling or transferred from the Centre are excluded from the study. Participants of pilot study were also excluded in the subsequent survey. **Instrument:** A self administered questionnaire consisting of 17 items was used, which is comprised on ethical issues were used for gathering information, which was piloted before the study for observing its significance and validity. Initially the questionnaire was translated into Urdu from English by Linguistic expert to enhance the better understandings for the participants.After that it was translated to English from Urdu by another expert of English.(Back to back translation)

Data collection procedure: Permission was taken from Ethical committee LUMHS Jamshoro. Permission had been sought from incharge of Centres (Institute of chest disease Kotri, Jamshoro).Consent was also be taken from study participants.120 participants were present in the specialized settings (Tuberculosis Hospitals) .Out of which 10 refused to participate in the study .After that 100 participants took part in the study after completing the consent and other formalities.(TB centres NOC/Permission)

Ethical Considerations: Approval was taken from concerned institutes for conducting the research survey.Informed consent was obtained from each study participant. **Data analysis** Data was analyzed by using SPSS version 16.0.Different age groups were formed such as participants aged less than 31 years, aged between 31-40 and more than 41 years of age in order to understand the statistical analysis. Similarly different experience groups were organized i.e.1-5 years, 5-10 years and those having experience more than 10 years were also structured. The Percentages were also taken. Chi square test was applied to see the association between the different variables.

RESULTS

Table 1 mentioned below describes the demographic characteristics of the participants that includes age expressed in groups such as participants aging less than 31 years were in 19 percent. Those aging between 31-40 years comprise the 43 percent. In addition to this no of participants falling the age between 41-50 years were 23 percent. Those aging greater than 50 years is having 15 %.

Table 1. Demographic and professional characteristics

Characteristic	n	%
Age	38.75±9.58	
Age group		
< 31 years	19	19.0
31 - 40 years	43	43.0
41 - 50 years	23	23.0
> 50 years	15	15.0
Gender		
Male	63	63.0
Female	37	37.0
Marital status		
Single	14	14.0
Married	86	86.0
Experience	9.48±7.84	
Experience group		
1 - 5 years	42	42.0
6 - 10 years	25	25.0
> 10 years	33	33.0
professional qualification		
Nurses	29	29.0
Doctor	50	50.0
Dispensar	21	21.0

Table 2. Satisfaction with the facility provided by the hospital		
	n	%
Keep working consent at high risk infectious diseases		
Agree	58	58.0
No comment	3	3.0
Disagree	39	**39.0**
satisfied with compensation		
Agree	48	48.0
No comment	12	12.0
Disagree	40	**40.0**
Understand the medical risk associated with TB hospital?		
Agree	92	**92.0**
No comment	6	6.0
Disagree	2	2.0

DISCUSSION

Our study results revealed that health workers treating sputum positive cases of Tuberculosis encounter different ethical issues which include lack of maintaining confidentiality of patient, having poor knowledge of ethics, lack of knowledge of basic ethical principles, Violation of patient's autonomy by treating prolonged period without his willingness. Participants agreed that they were concealing information from patient's family members regarding T.B disease. Health workers also said that they were working with patients, families carrying risk to other families. Participants notified that they encountered ethical issues while interacting with patients. Preventive measures provided were not sufficient. When asked about training about tuberculosis disease control, 65.7% male agreed that they took training, while 59.1% disagreed that they didn't get training. In addition to this 34.3% females said they had undergone for training for tuberculosis disease control, while 40.9% disagreed amongst females that they had not got any training regarding tuberculosis. As a health care provider, do you understand the medical risk associated with T.B when asked from the participants, their responses were as follows among doctors, nurses and dispensars regarding the understanding of the medical risks connected with tuberculosis.About 28% nurses agreed means they had knowledge pertaining to medical risks associated with tuberculosis, while the 50% of nurses had no understanding about medical risks which are connected with tuberculosis. Amongst the doctors 50% agreed and 50% did not agree regarding medical risks with tuberculosis. Dispensars who had understanding regarding the subject mentioned above were 21.7%.When asked that whether they got training for tuberculosis disease control? Pertaining to question mentioned above, the results showed that 25.7% nurses Agreed that they had got tuberculosis training, while 31.8% said that they didn't have training for tuberculosis disease control. In addition to this the doctors who agreed were 58.6% and those who disagreed were 27.3 %.Moreover, the Dispensars who had got the training were 15.7% and those who were without training were the 40.9%.However the Gender wise comparison of male and female that how much male were agreed and how much were disagreed?.The 64% male agreed that they knew the medical risks accompanied with tuberculosis, while the 50% disagreed about their understanding regarding the medical risks with tuberculosis. In addition to this, the 35 % of females were agreed on the medical risks associated with tuberculosis, while the 50 % were not agreed means that they didn't have the understanding regarding the medical risks associated with tuberculosis.

Previous studies that were conducted in various settings revealed that the health workers whether working in General Hospitals or Tuberculosis hospital, encountered ethical issues in the work settings. . A study of public health nurses in Louisiana reported the ethical conflicts in the areas of confidentiality; informed consent, conflict of interest, and whistle-blowing arise while treating TB patients [31]. A survey study was also conducted on nurses in Cape Town South Africa the study revealed that the Nurses expressed concerns about the possible risk of TB transmission to both patients and staff. The study has obtained the experiences of ward nurses concerning multiple factors influencing TB infection prevention and control practices [32]. A survey study was conducted in Puerto Rico among the specialist and infectionologist that revealed, the non-adequate facilities and lack of use of protective equipment was reported in treating tuberculosis. The results of this survey are regarding educational and safety policies of our professionals and institutions in the country [33]. A cross-sectional survey was conducted in 2005 in China.The Findings of the study revealed that TB infection control in TB centers

in Henan, China, appears to be inadequate and the prevalence of latent tuberculosis infection (LTBI) and TB disease among HCW was high. TB infection control practices in TB centers should be strengthened in China, including administrative measures, renovation of buildings, and the use of respirators and masks[34]. A survey study was carried in Nigeria, keeping in view the National TB programme of Nigeria, the health personals were assessed regarding knowledge about issues that exist in the clinical setting, and the results revealed that improved knowledge of health workers on the current issues concerning the disease, including the National guideline, is important for effective disease control [35].

CONCLUSION

The study results showed that the health workers are at increased risk of getting the disease and they were not satisfied with the measures available to them in the tuberculosis hospitals. Moreover they said that they encountered ethical issues in terms of autonomy of the patient by treating prolonged period without their willingness. In addition to this the participants showed their concerns regarding the measures available in tuberculosis hospitals. Study results suggested that participants had little knowledge about ethics and have no concept regarding the ethical principles. Study revealed that all the participants' nurses, the doctors and dispensars were equally facing ethical dilemmas/issues. Qualification and Gender has no relationship in terms of encountering ethical issues. In exception to this,the workers had not undergone for tuberculosis control programmes that also can be responsible for creating ethical dilemmas.

ETHICS APPROVAL: The ERC gave ethical review approval

CONSENT TO PARTICIPATE: written and verbal consent was taken from subjects and next of kin

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CONFLICT OF INTEREST: No competing interest declared.

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