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Prevalence, Management And Percieved Psychological Impacts Of Leprosy Diesease In National Tuberculosis And Leprosy Training Centre, Saye Village, Zaria (2005 – 2010)

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ABSTRACT :
Leprosy is a Medico- Social problem with a declining in its medical form due to the presence of effective treatment (MDT) but its social aspect in term of stigmatization disability, deformities, loss of self – respect and loss of self-esteem and ostracizing of affected ones and misconception of the disease by the community have been well identified as a major threat, therefore, making patients more vulnerable to destitution and social isolation. This study was carried out to determine the prevalence, management of leprosy disease and psychosocial impact of the disease among residents of leprosy training centre, Saye, Zaria, Kaduna state between January, 2005 and December, 2010. The study revealed that social isolation (94%), anxiety, 90.9% shame 84.4%, depression 81.8% emotional disturbances 71.4%, the least experienced psychological impacts were loss of selffesteem and disfigurement. It was concluded that health education and information should be paramount when caring for the patients with leprosy because of the psychological impact experienced by patient.

Key Words: Management, Prevalence, Perceived Psychological impact Saye Village.

INTRODUCTION

Leprosy disease also known as Hansen's disease is a chronic granulomatous disease caused by mycobacterium leprae, an acid fast, rod - shaped bacillus principally affecting the peripheral nerve, mucosa of the respiratory tract and the skin of human being (Ryan, 2004). Hansen's disease named after a physician Gerhad Armaver Hansen was discovered in 1873 and has struck fear into human being for thousands of years and known as a contagious, humiliating and incurable disease first recognize in the ancient civilization of China, Asia, Latin America and Africa (Mostly Egypt)

with the alarming rate in Africa due to the sanitary environmental condition, wrong misconceptions about the disease and also over crowded population (Jopling, 1991). The minimum incubation period reported is as short as a few weeks and this is based on the very occasional occurrence of leprosy among young infant while the maximum incubation period reported is as long as 30years hence it is generally agreed that the average incubation period should be put at between three and five years (American Leprosy Mission 2009)). World wide, two to three million people are estimated to be permanently disabled because of leprosy with India having the greatest cases and Brazil as second, follow by Burma as the third (Wash, 2007). In 1999, the world incidence of Hansen's disease was estimated to be 640,000. In 2007,38,284 cases were identified (BC News, 2003). In the same year the World Health Organization listed 91 countries in which Hansen's disease is endemic with India, Burma and Nepal containing 70% of cases. In 2003, 763,917 new case were detected world-wide and in that year WHO listed Brazil, Madagascar, Tanzanian, and Nepal as having 90% Hansen's disease cases.

According to the recent figure form which new cases are detected worldwide have decreased by appropriately 107,000 cases from 2003, in addition, the global registered prevalence of Hansen's disease was 286,063 cases, and 407, 791 new cases was detected during 2004 (WHO, 2008). In Nigeria, at the start: of 1992, WHO thought there were 360,000 people with leprosy by July, 1993, the WHO had revised their estimate to 63,000 following a cleaning of the register when it was discovered that some patients had been taking treatment for 10, 15 and 20years. In 1996, Nigeria achieved less than I case of leprosy per 10,000 people in 2003 and in 2006 Nigeria was one of the seven countries in Africa reporting more than 1,000 new cases a year, the other countries being Angola, the democratic republic of Congo, Ethiopia, Madagascar, Mozambique and Tanzania, within. Within Nigeria leprosy which is know as "Opo" in the southern part, "Ete" in West, "Mekuturu" in the North and in the East, has the highest level of infectivity in Benue,

Cross River, Ebonyi and Gombe States, followed closely by Adamawa, Kano, Taraba, Yobe and Zamfara **(WHO, 2008).** The gross deformities that led to a social stigma, remain a major obstacle to self-reporting and early treatment of the disease (Joplin, 1991). It was the introduction of multi drug therapy (MDT) in the early 1980's that the disease could be diagnosed and treated successfully within the community (WHO, 2006). MDT for multi-bacillary leprosy consists of rifampicin, diapsone and clofazinine taken over 12 months. Dosages adjusted appropriately for children and adult are available in all Primary Health Centers in the form of blister packages (WHO, 2006) and this intervention in collaboration with leprosy mission International Nigeria (TLMN) has helped to reduce the prevalence in some regions of Nigeria where the prevalence is alarming. The cause of leprosy is directly linked to the bacteria mycobacterium leprae. The bacterium is though to be spread from person to person primarily through infected droplet. However, more than half of those with the disease have no confirmed contact with an infected person. Other factors that can playa role in the cause of leprosy include genetics, the extent of exposure, and environmental conditions (Arthur.2006). World wide distribution of leprosy in 2003 revealed that two to there million people are estimated to be permanently disabled because of leprosy disease with India having the highest number of cases, with Brazil as the second and Burma as the third (WHO, 2003; Olawale, 2013). In the year 2000, the WHO listed 91 countries in which leprosy disease is endemic. India, Burma and Nepal contained 70% of cases with India having over 50% of the World's leprosy cases (Times of India, 2009). 763,917 new cases were detected worldwide in the year 2002, and in that year the WHO listed Brazil, Madagascar, Mozambique, Tanzania and Nepal as having 90% of the disease. According to recent figures from WHO (2009) new cases detected has decreased by appropriately 107,000 cases (21 %) from 2003 to 2004. This decreasing trend has been consistent for the past three years. In addition, the global registered prevalence of Hansen disease (HD) was 286,063, cases, 407,791 new cases were detected

during 2004. At the beginning of 2008, the HD. Stood at 212,802 cases while the number of new cases detected during 2007 was 254,525 (excluding the new cases in Europe), and about 600,000 new cases arise every year mostly in Asia, Africa, Central and South America and Pacific Island. The leprosy mission International of Nigeria has described Benue. CrosssRiver, and Gombe State as having the highest level of disease in Nigeria followed by Adamawa, Kano, Taraba, Yobe and Zamfara.

Leprosy has affected people for thousands of years it was, and often still is, seen as a contagious, mutilating disease. Today, leprosy can be clinically cured relatively easily, yet the effects is that it has on a patient's life can go on indefinitely. It is a stigmatizing condition, and can lead to person affected being rejected and excluded from society (Kaur & Ramesh, 1994). Other examples of social exclusion are available in literature (Awofeso, 1996 Senturk. & Sagduyu, 2004; Brakel, 2003; Bhatia, et al. 2006)

A person's sense of well - being and the level to which they see themselves as useful is inextricably linked to their income generation and ability to secure employment for the spouse or parent, the ability to provide for dependant is linked to a sense of worth and fulfillment in their role. There are few studies on leprosy, stigma and income generation. However, some researchers have explored the topic. Kisivuli, Othieno, Mbury, Kathuku, Obon and Nasoko (2005). Stated that even today, social stigmatization is frequent so that affected persons with clear signs of chronic manifestations are often unable to work, or to marry, they become dependent for care and financial support, leading to insecurity, shame, isolation and consequently economic loss (Leekasa Rizuneh & Akem 2004). Comment on the experience of people affected by leprosy, in their set of operational principles for rehabilitation of people affected by leprosy - pointing out that many such people live in extreme poverty and have few opportunities to earn an income. They may be excluded from their former work place or denied access to their former market. They went

on to state that physical impact of leprosy may make it possible to continue in their former occupation, in a study on community behavior in Eastern Nepal towards leprosy affected people. Erinfolami and Adeyemi (2009) showed that person affected by leprosy experience exclusion from social life. They concluded that affected by leprosy experience unsympathetic reactions, insults, hate, abandonment or rejection. They went on to say that the motive for such negative community behaviour is a fear of infection by germs, as well as fear of a curse of God.

In a study undertaken by Peter and Eshiet (2006), on male/female (sex) difference in leprosy patient in South Eastern Nigeria reveals that number of the female case were not as high as male. His hospital retrospective examination shows that out of 2,309 cases, male leprosy patients were 1527 (66%) while females were 782 (33%) confirming to the usual 2: 1 male/female ratio. Low ratio of female leprosy is attributed to the longer incubation period in females than males. Brakel (2003). Emphasized that eliminations of leprosy disease which remain a public health problems requires better test for early diagnosis, giving effective vaccines in high risk regions, research into the transmission of M. Leprae to permit new logical interventions, successful campaign and health education on leprosy disease, its prevention and control.

AIMS AND OBJECTIVES OF THE STUDY

The broad aim of this project is to determine the prevalence and management of leprosy in national tuberculosis and leprosy training centre, Saye between January, 2005 and December 2010.

SPECIFIC OBJECTIVES

- To determine the yearly prevalence of leprosy disease from January, 2005 to December, 2010.
- To determine the most prevalent type of leprosy disease in the centre.
- To determine the geographic prevalence in the centre.
- To determine the psychological impact of tuberculosis among selected respondents.

- To determine the modes of treatment of leprosy in the centre.

RESEARCH QUESTIONS

- What is the yearly prevalence of leprosy between the period of2005 and 2010?
- Which type of leprosy is most prevalent in the centre during the study period?
- What are the perceived psychological impacts of leprosy among selected attended in the centre?
- What are the modes of treatment of leprosy disease in the centre?

DELIMITATION OF THE STUDY

The research was delimited to ?National Tuberculosis and Leprosy patients that were available during each visit irrespective of their sex, age, religions affiliation and level of education.

RESEARCH DESIGN

A retrospective, and cross sectional descriptive designs were adopted for the study. The retrospective design was used to determine the prevalence and management of leprosy in National tuberculosis and leprosy training centre, Saye, while cross – sectional design was used to assess the perceived psychological impacts among respondents that were randomly selected.

RESEARCH SETTING

The research study was carried out in the leprosy unit in National Tuberculosis and Leprosy Training Centre, Saye village, Zaria, Kaduna State. When the North Central, State was created in 1963 from the old Northern region, the Zaria leprosy settlement as it was previously called was renamed the provincial leprosy settlement of the Northern Central state of Nigeria. In 1965, the government took over the ownership of the centre from the missionaries, then the name was changed to National Tuberculosis and Leprosy Training centre, Saye Village.

STUDY POPULATION

The study population included all medical record of leprosy patients who were diagnosed at the centre and treated between January, 2005 and

December, 20 I O. The study population extended to patient that turned up for collection of drugs.

SAMPLE SIZE AND SAMPLING TECHNIQUE

In this research, the data at the health record department of the centre were used. The sample size consisted of seventy seven (77) respondents that were selected randomly for a period of 5 visits. While the health records between January, 2005 and December, 20 I 0 were used.

INSTRUMENT FOR DATA COLLECTION

The health records on cases of leprosy between January, 2005 and December, 2010 were as part of the instrument while self- designed questionnaire was used to assess the perceived psychological impact of leprosy. It consisted of a items using likert type of scale.

ETHICAL CONSIDERATION

Ethical approval was given by the Chief Medical Director through a letter of introduction by the head of department of Nursing Science, Ahmadu Bello University, Zaria.

RESULT

Table 1a:- Yearly prevalence of leprosy disease between January, 2005 and December 2010

Year	Number (N)
2005	64
2006	44
2007	60
2008	50
2009	38
2010	20

Table 1b:- Gender distribution during the study record.

Year	Male		Female		Total
	Freq.	%	Freq	%	
2005	60	93.8	04	06.3	64
2006	37	57.8	0	10.9	44
2007	51	79.7	09	14.1	60
2008	43	67.2	07	10.9	50
2009	33	51.6	05	07.8	38
2010	17	26.6	03	04.7	20

Considering the table 1a above through the study period. The issue of leprosy was pronounced in Males than Female with the pick recorded in the year 2005 (60=93.8%)

while the high pick for female was reworded in 2007 with 09 (14.1%) cases. The table showed the decline in the occurrence of leprosy, this may not be unconnected with the lowest was 2010.

Table 2 :- perceived psychological impact of leprosy

s/n			A		SA		D		SD	
		f	%	f	%	f	%	f	%	Total
1.	Loss of self-esteem	04	05.2	45	58.4	03	03.9	15	19.5	77
2.	Loss of self-respect	11	14.3	55	71.4	06	07.8	05	19.5	77
3.	Emotionally disturbed because of wounds	0	0	45	58.4	07	09.1	25	32. 5	77
4.	Emotionally disturbed because of discomfort	04	05.2	55	(5) 71.4	15	05.2	03	03.9	77
5.	Depression	08	10.4	63	(4) 81.8	04	05.2	03	03.9	77
6.	Sense of shame	05	06.5	65	(3) 84.4	0	0	07	09.1	77
7.	Anger	10	13	53	68 .8	12	15.6	05	06.5	77
8.	Anxiety	0	0	70	(1) 90 .9	0	0	07	09.1	77
9.	Social	04	05.2	73	(1)94. 8	0	0	0	0	77

Considering the table 2 above, it showed that the most prevalence impact of leprosy was social isolation which was experienced by 73 (94.8%) of respondents, followed by anxiety which was experienced by 70 (90.9%) of respondents while

65 (84.4%), 63 (81.8%), 55(71.) and 55(71.4) of respondents experienced sense of shame, depression, emotional disturbances and loss of self – respect respectively. The least experienced impacts were loss of esteem 45 (58.4) and disfigurement 45 958.4%).

Table 3: The socio-geographic spread of leprosy disease in the center between 2005 and 2010

State	2005	2006	2007	2008	2009	2010	Total
Adamawa	08	04	02	02	02	02	20
Benue	10	06	12	09	09	06	52
Borno	05	06	07	09	02	01	20
C. River	16	06	08	05	05	01	42
Ebonyi	09	04	04	06	08	01	30
Gombe	08	05	06	04	02	0	26
Jigawa	02	02	02	05	01	01	14
Kano	04	02	06	04	04	04	24
Taraba	0	04	08	02	02	02	18
Yobe	02	03	04	07	0	0	16
Zamfara	0	02	01	04	01	02	10
Total	64	44	60	52	38	20	278

Table 3 above showed that the socio-geographic spread in Adamawa State between 2005 and 2010 was 2 with the highest prevalence in 2005. It was 52 in Benue with highest prevalence in 2007, Cross River with the highest prevalence in 2005, in Ebonyi the peak was in 2005. Gombe has its peak in 2005, Jigawa with its peak in 2008, Yobe recorded 16 cases while Taraba recorded 18 cases and Kano recorded 24 cases. The table reveals that Benue State recorded the highest spread of disease

while Zamfara recorded the lowest spread of the disease with 10 cases

Table 4.1.

Multidrug Therapy for Paucibacillary (PB)

	REIFAMPICIN	**DAPSONE**
Adult – 50 – 70kg	600mg/m	100mg/d
Child – 10 – 14years	450mg/m	50mg/d
Less than 10 years	00mg/m	25mg/d

Table 4.2 multi during therapy for multi bacillary (MB) leprosy.

	Fifampicin	**Dapsone**	**Clofazimine**
Adult 50-70kg	600mg/m	100mg/d	50mg/d & 300mg/m
Child 10-14years	450mg/m	50mg/d	50mg/m & 150mg/m
Less than 10years	300mg/m	25mg/d	50mg twice /Wk & 100mg/m

Table 4.2 showed that the treatment of multi-bacillary leprosy was through the use of the combination of rifampicin, Dapsone and Clofazimine. 4.2 show that pauci-bacillary leprosy was treated with the combination of rifampicin, dapsone while table 4.3 showed treatment of singled lesion paucibacillary leprosy (SLPB) was by the combination of Rifampicin, Ofloxacin and Minocycline

Table 4.3 moite of Treatment of Leprosy in the centre

	Fifampicin	**Dapsone**
Adult 50-70kg	600mg/m	100mg/d
Child 10-14years	450mg/m	50mg/d
Less than 10years	300mg/m	25mg/d

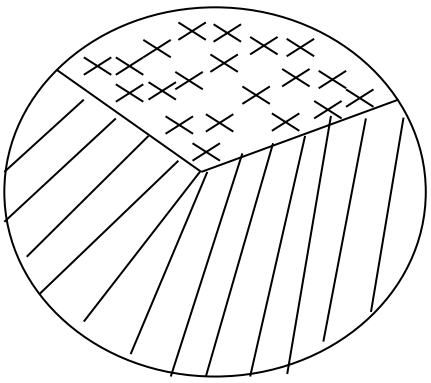
Rifampicin, and Clofazimine monthly does are given under supervision

Table 4.4 multi drug therapy for single paucibacillary (SLPB) leprosy

	Rifampicin	**Ofloxacin**	**Minocycline**
Adult 50-70kg	600mg/m	400mg/d	400mg
Child 10-14 years	300mg	200mg `	50mg

Rifampicin and clofazimine monthly doses are given under supervision.

Fig 1. Prevalent types of leprosy



KEY

Xxxx Paucibacillary

////// Multibacillary

The fig 1:- the pie chart above showed the most prevalent type of leprosy wasMultibacillary which accounted for 97.8% (272) while pauci-bacillary type accounted for 2.2% (6). This indicates that most of respondents suffered from multibacillary types of leprosy

DISCUSSION OF FINDINGS

Table I showed the yearly prevalence of leprosy with year 2005 experienced highest 93.8% males and 06.3% Females follows by year 2007 with 79.7% Male and 14.1 % Females.

The table showed the decline in the prevalence of leprosy. The finding supports WHO, (2006, Laddhan, 1997). In the year 2007 with 14.1 %, this finding was congruent with that of Peter and Eshiet (2006) that out of 2,309 cases of leprosy patients 66% were Males while 33% were Females 2: I Male/ Female ratio. The finding was equally congruent with Brakel (2003) which emphasized low ratio of Female leprosy.

Table 2 showed that the most prevalent perceived psychological impact of leprosy was social isolation which was experienced by 94.8% of respondents, followed by Anxiety experienced by 70 (90.9%) of respondents while 65 (84.4%), 63 (81.8%), 55 (71.4%) of respondents experienced sense of shame, depression, emotional disturbances and loss of self-respect. respectively. The least experienced psychological impacts were loss of self- esteem 45 (58.4) and disfigurement 45 (58.4%). These findings were congruent with Kaur and Ramesh (1994) that

leprosy is a stigmatizing condition and can lead to person being rejected and excluded from society, it also supports, Awofeso (1996), that other examples of social exclusions are available in literature. The findings also supports that of Senturk and Sagduyu (2004); Bradel, (2003), Bhatia, et al (2006) that a person's sense of well-being and the level to which they see themselves as useful is inextricable linked to their income generation and ability to secure employment for the spouse or patients, the ability to provide for dependants is linked to a sense of worth and fulfillment in the role. The finding on perceived psychological impacts was also congruent with the finding of Kisivali et al (2005) 'which state that affected person with clear signs of chronic manifestation are often unable to work or to marry, they become dependent for care and financial support, lending to insecurity, shame. isolation and consequently economic loss in terms of the socio- geographic spread of leprosy disease during the study period, table 3, showed that Adamawa State between 2005, and 20 I 0 was 20 with the highest prevalence in 2005, it was 52 in Benue with the highest prevalence in 2007, Cross-Rivers with the highest in 2005, Ebonyi the peak was in 2005, Gombe experienced its peak in 2008. Yobe recorded 16 cases while recorded 18 and Kano 24 cases. The table reveals that Benue State recorded the highest spread of disease while Zamfara recorded the lowest spread of disease with 10 cases. This finding was at variance with the WHO (2008) which reveals that the highest spread of disease were found in Benue, Cross Rivers, Ebonyi and Gombe State, followed closely by Adamawa, Kano, Taraba, Yobe and Zamfara. In terms of Medical Management, Table 4 showed that the treatment of Multiibacilliary leprosy was through the use of the combination of Ramfampicin, Dapsone and Clofazimine, 4.2 showed that pauci- bacilliary was treated with the combination of Rifampicin and Dapsone, while table 4.3 showed treatment of single lesion pauci-bacilliary leprosy, (SLPB) was by the comination of Rifampicin, Ofloxacin and Minocycline. This finding was in support of WHO (2008) that use of multi drug therapy should be treatment regimen.

The finding corroborated that of Olawale (2013) that modes of treatment of the different types of leprosy diseases were combination of drugs fig. I showed that the most prevalent types of leprosy was mult-bacilliary which accumulated for 2.2.% (06). This finding supported the finding of Olawale (2013) which stated that most of respondents suffered from mult-bacilliary types of leprosy.

SUMMARY

The study was carried out to determine the prevalence, perceived psychosocial impacts and treatment of leprosy in National Tuberculosis, and Leprosy Training Centre, Saye Village, Zaria between January 2005 and December, 2010. Review of past records of 278 patients was used in the collection of data while 77 respondents were radiantly selected among those that visited the centre collect drugs. Analysis of data prevalence of leprosy started declining during the introduction of multi-drugs modes treatment and majority of patients experienced various degrees of psychological disorders.

CONCLUSION

The findings from the study reveal that the rate of prevalence is decreasing year in / year our. However, it was discovered that the patients seek medical attention only when the infection is severe which exposed then to disability, deformity and psychological trauma. This is to show that level of awareness and ignorance about leprosy is still high, therefore the stakeholder and health education and information on health hazard of leprosy.

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