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RESEARCH ARTICLE

KNOWLEDGE, AWARENESS AND PERCEPTION ON HIV/AIDS AND HEPATITIS-B AMONG NARIKURAVAR GYPSIE POPULATION RESIDING AT VALLIYUR, THIRUNELVELI DISTRICT- A CROSS SECTIONAL STUDY

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ABSTRACT

Background: HIV/AIDS and Hepatitis-Bare major health problems worldwide. The number of infected people are liable to increase day by day. Awareness towards prevention and control of these diseasesare necessary among both educated and illiterate people. This study is concerned with a special branch of folk medicine in Tamilnadu, India which is formerly peripatetic hunter community settled all over South India.

Objectives: This study is aimed at assessing the awareness and knowledge about HIV/AIDS and Hepatitis-B among the Narikuravar population residing at Thirunelveli district.

Materials and Methods: A questionnaire based study was conducted amongst the Narikuravar Gypsies population residing at Valliyur, Thirunelveli district. Out of 212 members of both the sex, 108 respondents who were above 18 years of age were included in the study. A close ended questionnaire of 20 self-administered questions was given. Results were statistically analyzed using chi square test. The level of significance was set at p value <0.05.

Results: A total of 108 subjects of 52 male and 56 female were recruited. Out of 108 participants all were aware regarding HIV/AIDS and that it transmits through Blood. But still almost 50% of participants had superstitions regarding sharing food and hugging or shaking hands with HIV/AIDS patients.

Conclusion: This showed the level of awareness about HIV/AIDS among the Narikuravar Gypsies population residing at Valliyur, Thirunelveli district. The awareness regarding the HIV/AIDS and Hepatitis-B was less and superstition regarding the same was more compared to other population. Thus it is necessary to break such superstition about the disease in order to bring a complete awareness of the disease.

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INTRODUCTION

Blood borne and sexually transmitted diseases encompass the extensive health problems in developing countries. In the past few years, the assertive nature of HIV/AIDS and Hepatitis-B is intensifying. India is the second most populous country in the world and has defying sociopolitical and demographic characteristics. As a deduction, the problems endured contra to the major diseases that are inordinately epidemical is tremendously tedious. People tormenting from HIV in India is 47% compared to other Asian and Pacific countries and AIDS related deaths in India is 5% when compared to other Asian and Pacific countries (www.unaids.org/en/resources/campaigns/2014/2014gapreport/gapreport). This escalating risk is credited to the country's copious population, paucity of knowledge and awareness which has embitter the prevailing and emerging public health challenges, the confrontations is facing. There are trifling studies that advocates HIV/AIDS is purely men orientate and they portray a less eminent role in prevention of the same. In a study conducted by Khan et al, showed a perspective that men's major restraint is to cater fiscal crutch for their families and child bearing and

contraception are women's portrayal (Khan, 1998). In another study, husband and wives duos consider reproductive health is principally "women's affair" (Barua, ?) Further the rural set up is in par with urban in such diseases. Hepatitis-B, au contraire, pursues the same route of transmission as HIV/AIDS. It is conceivably a life threatening liver infection engendered by Hepatitis-B virus. It is a preeminent global health problem. Further it can provoke chronic infection and oblige people in lofty risk of death from cirrhosis and liver cancer. Since 1982, the vaccines feigning counter to Hepatitis-B are available which provided almost effective prevention against the infection and development of chronic liver diseases or liver cancer due to Hepatitis-B. The World Health Organization suggests that more than 2 billion people worldwide have been infected with Hepatitis-B, of these approximately 240 million individuals have chronic liver infection and at risk of serious illness and death, mainly from liver cirrhosis and hepatocellular carcinoma (HCC). More than 780,000 people die every year due to acute or chronic diseases of Hepatitis-B (World Health Organization, 2014; Lavanchy, 2004; Lok, 2002 and Goldstein, 2005). India harbors 10-15% of the entire pool of Hepatitis-B infection carriers of the world (Datta, 2008). India has around 40 million Hepatitis-B carriers of which 15-25% are likely to suffer from cirrhosis and liver cancer and die prematurely (Datta, 2008) This epidemiological data on Hepatitis-B infection is of high significance to implement new strategies to tackle the spread of the disease and to determine area of high endemicity and to understand the risk of transmission (Puri, 2014).

HIV and Hepatitis-B prevention must be a multidisciplinary approach involving physicians, dentists, pharmacists, nurses, health educators, therapists and other health care providers. Patients see dental practices as a place where they can discuss and receive valuable and trusted information about HIV and Hepatitis-B. Studies consistently demonstrate that patients view their dentist as a trusted and authoritative source of health information (Alex, ?). There is a high possibility that dentists treat HIV and Hepatitis-B infected patients unknowingly because most patients are probably unaware of their HIV or Hepatitis-B status. The undiagnosed, untreated patient may unknowingly be a hazard to dentists, dental staff and other patients, especially because every day dental practices involve invasive procedures and instrument reuse. There is documented evidence of HIV and Hepatitis-B transmission in dental operations (Puri, 2014). For these reasons, it is the role of dentists to ensure prevention and identify the incidence of the disease. The present situation of these diseases in India is complicated by several social and cultural belief among people especially in rural areas and tribes. There exists a social pressure among the women of such communities in early marriages and early child births and which makes them vulnerable and in turn the community is being the prey for such diseases. The present population dealt with in this study is such a kind of nomadic tribe named as Narikuravars. They are Nomads and reside at many parts of Tamilnadu and in this study, the population was chosen from Valliyur, Thirunelveli district. This population are thought to be migrated from the Northern parts of India approximately before 4 centuries. This has proof as they speak a language called 'Vagriboli' which indicates a Guajarati origin. The Narikuravars are predominantly depicted as Kuravar in ancient Tamil literature (Alex, ?) They are vagrant and roam in and out in one or more fixed routes. This population earns their living by hunting, fortune telling, selling medicines and cosmetics. This type of community has their own cultural practices and taboo which they do not often prefer sharing external. There are many Non-Governmental organizations supporting their living and the Indian Settlement Policies has benefitted them by providing small plots and houses called colonies. The Narikuravar society is divided into a number of hierarchically ordered patrilineal exogamous clans who have fixed relationships with each other and they are evenly distributed all over South India. The intercolonial relationships that is established through long standing perpetuated marriages along with political and economic concern and activity () The purpose of choosing this community is for two reasons. They remain isolated predominantly from outside communities and they are sexually active and promiscuous. Hence, their monitored sexual practices and their cultural belief would lead to several misfortunes which could not be dealt with when it becomes too late. This study is aimed at assessing the knowledge and awareness on HIV/AIDS and Hepatitis-B among Narikuravar Gypsie population residing at Valliyur, Thirunelveli district.

MATERIALS AND METHODS

Study Design: A descriptive cross sectional study was conducted on knowledge, awareness and perception on HIV/AIDS and HEPATITIS-B among the gypsie jackal community who are remotely connected to the normal society.

Study Area: The study was conducted in a place called Valliyur in Thirunelveli district in the southernmost part at the junction of the Eastern and Western Ghats of Tamilnadu at 8.4128° N, 77.6236° E.

Study Population: The entire universe of the Nomadic population of Narikuravar community residing at Valliyur were taken for the study. This population is highly inaccessible as they do not mingle with the other population. Permission to visit them for the study was obtained from the local NGOs who had a good relationship with the community. The entire population was informed priorly of the study as they were made to stay back from going for their business of selling handmade jewellery.

Ethical Clearance: Ethical Clearance was obtained from Institutional Review Board of the SRM Dental College prior to the study.

Methodology: Prior to the study the population was met directly with the help of local NGOs (Non-Governmental Organizations) and demography data was obtained. It included entire universe of Nomadic Narikuravar population. The study was conducted for three days according to the availability of the members of population. The members were made to assemble at a particular residence and the questions were asked to the study subjects. The study population was divided into three with 36 members each day to whom the questionnaire was given. As they were illiterate the question were asked by the investigator and the corresponding response were noted by a recording clerk.

Questionnaire: A validated questionnaire was prepared in their vernacular language before the study that comprises of 20 questions. The questionnaire was close ended with the choices of Yes, No and Unknown. The questions were translated to the local language of Tamil with the help of two individual translators.

Table 1. Based on Age

S.No	Questions	Response	age			chi square	p-value,significance
			18-25 yrs.	26-45 yrs.	More than 45 yrs.		
1.	do you know a disease named hiv/aids	yes	37	50	21	–	–
		no	0	0	0		
2.	does hiv/aids spread from mother to infant	yes	27	24	8	8.2259	0.01636, significant
		no	10	26	13		
3.	does hiv/aids spread from sharing food in same container	yes	26	40	20	5.5164	0.075911, not significant
		no	11	10	1		
4.	is hiv/aids a preventable disease	yes	27	14	10	17.258	0.000179, significant
		no	10	36	11		
5.	is hiv/aids a curable disease	yes	7	15	6	1.4546	0.483207,not significant
		no	30	35	15		
6.	does hiv/aids spread by shaking hands or hugging an already infected person	yes	24	38	19	4.7362	0.093657,not significant
		no	13	12	2		
7.	do you prefer eating with an hiv/aids infected person	yes	15	24	20	17.822	0.000135, significant
		no	22	26	1		
8.	washing your sex organs or bathing after intercourse will prevent hiv/aids	yes	17	21	8	0.3511	0.839015,not significant
		no	20	29	13		
9.	does hiv/aids spread by body tatooing	yes	34	41	21	5.3653	0.06838, not significant
		no	3	9	0		
10.	does hiv/aids spread through blood transfusion	yes	37	50	21		
		no	0	0	0		
11.	does hepatitis-b spread while having food cooked by an infected person	yes	0	0	1	12.25	0.015584,significant
		no	6	17	1		
		unknown	31	33	19		
12.	does hepatitis-b spread by sharing food with infected persons	yes	6	3	0	18.086	0.001187,significant
		no	0	14	2		
		unknown	31	33	19		
13.	does hepatitis-b spread through sneezing	yes	6	11	2	9.8338	0.043322,significant
		no	0	6	0		
		unknown	31	33	19		
14	does hepatitis-b spread through shaking hands with infected person	yes	0	4	1	8.2085	0.084232,not significant
		no	6	13	1		
		unknown	31	33	19		
15.	does hepatitis-b spread by having sex with infected person	yes	0	5	1	8.5337	0.073874,not significant
		no	6	12	1		
		unknown	31	33	19		
16.	does hepatitis-b spread by sharing unsterile shaving kits	yes	0	7	1	9.5672	0.048384,significant
		no	6	10	1		
		unknown	31	33	19		
17.	does hepatitis-b spread faster than hiv/aids	yes	0	1	1	8.9902	0.061344,not significant
		no	6	16	1		
		unknown	31	33	19		
18.	is hepatitis-b a curable disease	yes	6	16	2	6.9403	0.13908, not significant
		no	0	1	0		
		unknown	31	33	19		
19.	is vaccination required for young children against hepatitis-b	yes	6	16	2	6.9403	0.13908, not significant
		no	0	1	0		
		unknown	31	33	19		
20.	does hepatitis-b spread through blood transfusion	yes	6	12	2	9.1394	0.057709,not significant
		no	0	5	0		
		unknown	31	33	19		

If a particular member is illiterate he/she was given explanation for each question and their responses were recorded by a recording clerk. The questionnaire with 20 questions were split into two categories. The first 10 questions were regarding the awareness of HIV/AIDS and rest of the 10 questions were regarding the awareness of Hepatitis-B. The questions were based on their habits in their daily activities related to their disease and based on their superstitions regarding the diseases. The questions included in the study are given below.

Inclusion and Exclusion Criteria: The population of the gypsie jackal community constitutes entire sample of the study as they were small in number. As this was a study that is to be done on adult due to nature of questions implied, subjects who were above 18 years of age were included in the study. Those who were absent during the study period of three days were excluded of the study.

Sampling: The population had 212 members. Out of 212 members of both the sexes, those who were following inclusion criteria were selected and thus 108 sample were chosen. Out of 212 subjects, 58 were excluded due to age criteria and 46 were excluded as they were not present during the study. So a total of 108 subjects were taken as study population. Of 108 subjects, 52 male and 56 female were involved and were categorized to three age groups of 18-25years with 37 members, 26-45years with 50 members and more than 45 years of age with 21 members. The 108 subjects were even split up into Male and Female population.

Study Armamentarium: A close ended questionnaire of 20 questions was given. The first 10 questions were regarding their awareness on HIV/AIDS and the remaining 10 questions were regarding their awareness on Hepatitis-B. The questions were given in the Tamil language so that it can be easily conveyed to them as their literacy level is very minimum.

Statistical Analysis: The results were statistically analyzed using Chi Square Test for Homogeneity. The comparison with age and comparison with gender was done separately. The statistical test was performed with SPSS ver. 20. The level of significance was set at p value <0.05.

irrespective of their age. Few basic questions regarding their knowledge about HIV/AIDS such as "HIV/AIDS spread from mother to infant", "HIV/AIDS a preventable disease" and "HIV/AIDS a curable disease" lacked awareness in such a way that nearly half (45.3%, 52.77% and 74.07% respectively) of

Table 2. Based on Gender

S.No	Questions	Response	Sex		Chi square	P-Value, Significance
			Male	Female		
1.	Do you know a disease named hiv/aids	Yes	52	56	–	–
		No	0	0		
2.	Does hiv/aids spread from mother to infant	Yes	23	36	4.3753	0.036463,
		No	29	20		significant
3.	Does hiv/aids spread from sharing food in same container	Yes	47	39	7.1513	0.007491,
		No	5	17		significant
4.	Is hiv/aids a preventable disease	Yes	18	33	6.3952	0.011443,
		No	34	23		significant
5.	Is hiv/aids a curable disease	Yes	16	12	1.225	0.268389, not
		No	36	44		significant
6.	Do es hiv/aids spread by shaking hands or hugging an already infected person	Yes	43	38	3.1648	0.07524,not
		No	9	18		significant
7.	Do you prefer eating with an hiv/aids infected person	Yes	20	39	10.5768	0.001145,
		No	32	17		significant
8.	Washing your sex organs or bathing after intercourse will prevent hiv/aids	yes	21	25	0.2	0.654759, not
		No	31	31		significant
9.	Does hiv/aids spread by body tatooing	Yes	50	46	5.3592	0.20613, not
		No	2	10		significant
10.	Does hiv/aids spread through blood transfusion	Yes	52	56		
		No	0	0		
11.	Does hepatitis-b spread while having food cooked by an infected person	Yes	1	0	5.5623	0.061967, not
		No	16	8		significant
		Unknown	35	48		
12.	Does hepatitis-b spread by sharing food with infected persons	Yes	6	3	5.1451	0.076342, not
		No	11	5		significant
		Unknown	35	48		
13.	Does hepatitis-b spread through sneezing	Yes	11	8	8.3732	0.015198,
		No	6	0		significant
		Unknown	35	48		
14.	Does hepatitis-b spread through shaking hands with infected person	Yes	5	0	7.6986	0.021295,
		No	12	8		significant
		Unknown	35	48		
15.	Does hepatitis-b spread by having sex with infected person	Yes	6	0	8.3732	0.015198,
		No	11	8		significant
		Unknown	35	48		
16.	Does hepatitis-b spread by sharing unsterile shaving kits	Yes	8	0	9.9605	0.006872,
		No	9	8		significant
		Unknown	35	48		
17.	Does hepatitis-b spread faster than hiv/aids	Yes	2	0	6.0267	0.049127,
		No	15	8		significant
		Unknown	35	48		
18.	Is hepatitis-b a curable disease	Yes	16	8	5.5623	0.061967, not
		No	1	0		significant
		Unknown	35	48		
19.	Is vaccination required for young children against hepatitis-b	Yes	16	8	5.5623	0.061967, not
		No	1	0		
		Unknown	35	48		
20.	Does hepatitis-b spread through blood transfusion	Yes	17	8		
		No	0	0		
		Unknown	35	48		

RESULTS

Descriptive Statistics: The population encompasses a total of 227 members and for this study, 108 sample were recruited who were above 18 years of age and are present on the day of the study. The sample included a total of 52 males (48.1%) and 56 females (51.8%). Based on age they were separated in three categories as 18-25 years with 37 samples (34.25%), 26-45 years with 50 samples (46.2%) and above 46 years with 21 samples (19.44%). This table shows a wide range of awareness lack among the nomadic population which is greatly attributed to their ignorance with the outside world. The first question and 10th question shows that the populations is aware of a certain disease named HIV/AIDS and it spreads through blood, the population were ignorant. Regarding the questions of HIV/AIDS is either preventable or curable, comparatively larger percentage of population between 26 to 45 years of age had a minimum knowledge. Shaking hands or hugging patients showed that the older generation were superstitious which was comparatively low in younger age groups. Consuming food with infected persons was mostly preferred by younger age group while 50% of them opposed it and was statistically significant. Awareness on sexual practice and HIV/AIDS was still a question as approximately 50% of all age group showed a positive response but since they understood that the disease spreads through blood, almost 80% of the population responded positively that it spreads through body tattooing with same needle and almost 100% population responded

positive for the spread of the disease through blood transfusion. Consecutively, regarding Hepatitis B, predominantly samples did not have any knowledge regarding a disease named Hepatitis B. Almost 80% of population of age 18-25 years, 60% of 26-45 years and 90% of population above 46 years had literally no knowledge about the spread of the disease through cooking food. There was a significant result with 34% of 26-45 years of age samples who also had minute knowledge regarding the same. Sharing of food with infected persons also showed significant results with 28% of 25-45 years aged population had few knowledge regarding this aspect. Furthermore significant results were obtained for the question regarding the spread of disease through sneeze predominantly. Majority of the population, 76.8%, had responded as unknown, while 17.5% had responded positive for spread of Hepatitis B through sneeze. Ignorance on Hepatitis B has attributed to lack of awareness regarding shaking hands or having sex with infected person.

Only 0.04% were aware that HIV/AIDS spreads through sex and only 0.07% were aware that it spreads through unsterile shaving kits. The awareness regarding the cure and spread of the disease was literally minimum of 76%. Almost 22.2% were aware that there exist vaccination for Hepatitis B and has to be preferably given to children and 18% were aware regarding the disease transfusion through blood. Among males and females the knowledge of HIV/AIDS was predominantly seen in males. The awareness regarding the sharing of food to the HIV/AIDS patients were low with 83.9% of males and 69% females answering no and nearly more than half the males and females presumed that this disease is not preventable. Almost 65% of the males believed that HIV/AIDS is not preventable whereas almost 58% of females answered that HIV/AIDS could be prevented and the result showed statistical significance. Consequently almost 74% of the subjects believed it to be a non-curable disease. Males predominantly had a superstition that HIV/AIDS might spread through physical contact such as, shaking hands, hugging or eating with an infected than females. On the case of Hepatitis-B the awareness about the disease was specifically less compared to HIV/AIDS. Most of the males who had awareness regarding Hepatitis-B believed that it spreads through sneezing and shaking hands. In contrary the females responded positive (14.2%) for its spread through sneezing but negative (14.2%) for handshakes. Both males (21.1%) and females (14.2%) responded negative for the spread of Hepatitis-B through sex and use of unsterile shaving kits. Furthermore 28.8% males and 14.2 % females believed that Hepatitis-B spreads faster than HIV/AIDS.

DISCUSSION

Hinged on the sample size of 108 preferred on the particular day of study encompassing 52 males and 56 females, this study has endeavored to disclose the cognizance among the utmost secluded unapproachable community called Narikuravas. Nevertheless the sample size was less significant enough the intact population was comprehended for coverage. The solitary exclusion criteria was the population below 18 years of age. The population was assessed for the two disease to which they are exceedingly vulnerable. In a study by Eknath Naik et al (Naik, 2005), the tribal population of southern Karnataka which encompass a hefty sample population of 5690, however, the present study though encompassed the universal sample, had met with only a slighter sample size of 108 which is on the ground of the lack of ingress to these population group. According to this study, the females were elevated in number (51.8%) paralleled to the males (48.1%). This is in accord with the above mentioned study by Eknath Naik et al (Naik, 2005). in which the females were 53% compared to the males (47%) of the population. So as to bring about analogies amid the study group, they were pigeon-holed based on age and gender as there was no other means of calculation. Based on age group, they were categorized into 3 age groups of 18-25 years, 26-45 years and more than 46 years.

Another study by Vlassoff et al (2012), showed that men had a larger knowledge about a disease named HIV/AIDS based on gender while based on age the younger women had a better awareness on HIV/AIDS. In contrary, this study showed that all the females who participated in the study were aware of the disease named HIV/AIDS. Concerning the spread of the disease, amplified awareness was sustained among the females compared to males. Female awareness was 53.1% while awareness among the males were51.1%. Pertaining to age, the awareness regarding the transmission was more in younger females of less than 45 years of age. This is attributed to the fact that females of younger generations are mostly exposed to the Social media through televisions when compared to older females and males. In contrary, the study by Eknath Naik et al showed that only 22% of the study subjects were aware of a disease named HIV/AIDS. Furthermore in his study those who were aware of HIV/AIDS only 20% knew the modes of transmission of the disease. In the present study, not only the subjects were aware of the disease transmission but also were aware of its spread through blood transfusion. Though their main hobby is body tattooing and furthermore they don't use sterilization protocols before tattooing, they were aware of the transmission through the needle and they believed that rinsing the needle in coconut oil would sterilize them from the disease if present.

As per the knowledge pertaining to HIV/AIDS, the population performed even more badly in case of Hepatitis-B as the population did not even have the basic few on the same in contrary to HIV/AIDS. Hepatitis-B is a still more isolated disease which is very vague in content even for the general public to understand and appears to be a much more unreachable for this kind of population. The awareness regarding Hepatitis-B was literally very minimal compared to the awareness pertaining to HIV/AIDS. Therefore of the 108 participants of Narikuravas population only 25 (23.1%) participants were aware something regarding Hepatitis-B. In contrary, a study by Setia et al (Setia, 2013), on health care workers showed a 100% awareness among the study population. Furthermore in a meta-analysis by Batham et al (Batham, 2007), showed that the prevalence of Hepatitis-B was 2.4% among the non-tribal population whereas 15.9% among the tribal populations. This shows that the tribal population is practically the not being focused regarding the awareness of Hepatitis-B and HIV/AIDS. There had been many policies that are being implemented for the population regarding the control of HIV/AIDS and Hepatitis-B by the World Health Organization in the Millennium Development Goals. Then again the extent of its reach and the population that has been profited has been clearly put out of this study as habitually the disadvantaged are the rural and such analogous tribal population. Hence the enforced policy and persistent monitoring by the Public Health Organizations will make the most impervious population beneficial.

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