International Journal of Research in Medical Sciences
Rahman MH et al. Int J Res Med Sci. 2013 May;1(2):123-128
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: 10.5455/2320-6012.ijrms20130517

Research Article

A demographic study on vitiligo (sheti) in Bangladesh

Mohd. Hafizur Rahman[1], Md. Ziaul Amin[2*], Matiar Rahman[3], Mohd. Abdus Satter[4]

[1]Department of Biochemistry, Sir Salimullah Medical College, Dhaka-1110, Bangladesh
[2]Department of Genetic Engineering and Biotechnology Technology, Jessore Science and Technology University, Jessore7408, Bangladesh
[3]Department of Biochemistry and Molecular Biology, Rajshahi University, Rajshahi 6205, Bangladesh
[4]Division of Food and Nutrition, BCSIR, Dhaka-1205, Bangladesh

Received: 3 March 2013
Accepted: 26 March 2013

***Correspondence:**
Dr. Md. Ziaul Amin
E-mail: aminziajstu@yahoo.com; ziaulamin1967@gmail.com

ABSTRACT

Vitiligo is quite prevalent and constitutes a major psychological health problem in Bangladesh. To determine the effects and extent distribution of Vitiligo among the people, we mainly focused on the sociodemographic studies on Vitiligo in Bangladesh. The patients volunteered in this study were randomly selected from the Skin and Venereal disease department of Rajshahi Medical college hospital, Rajshahi, Bangladesh during 2009-2011. In this sociodemographic studies 125 vitiligo patients of different age groups were carried out. Age distribution, Sex incidence, occupation, itching, life living status, food allergy, social problem were studied. In this study, disease incidence was the highest 44% among 11-20 years age group. In case of sex incidence the female patients were 56%, on the other hand, male recorded 44%. The demographic characteristic showed that the students were the highest percentage (48%) suffering with Vitiligo by occupation. Family history was the most important survey in this study. 32% patients said they had prior to family history. The maximum patients had living status of middle class (40%). In this study 24% patient complained about Food allergy and the participant patient also complained the social problem of Vitiligo. Eighty percent patients reported that most of the person avoids them because general people know that Vitiligo is an infectious disease. This study will give the social consciousness about Vitiligo i.e. it is not an infectious disease.

Keywords: Vitiligo, Sociodemography, Food allergy

INTRODUCTION

Vitiligo is a specific common often heritable and acquired disorder characterized by well-circumscribed milky-white cutaneous maculae's devoid of identifiable melocyte (Koranne RV *et al.* 1988).[1] Majumder *et al.* 1993 reported about the heritable condition of been Vitiligo, although the inheritance has not fully established, they predicted that up to four genic loci may be involved.[2] Up to 30% patients have been reported Vitiligo in other family members and up to 21% of first generation family member may be affected (Majumder *et a*l. 1993). Children are at great risk, followed by siblings, parents, then, grandparents (Schachter M. *et al.* 1947).[3] Vitiligo has been observed in monozygotic twins, the age of onset extent and course may be similar or dissimilar, Vitiligo affecting only one twin has been reported (Sharquie *et al.* 1984).[4] Some time Vitiligo confused with leprosy. When vitiligo confused with leprosy then it is difficult for young men or women to

obtained jobs, especially when involvement of the face or other exposed areas makes the disease so conspicuous. Similarly, under the Hindu system of family to arrange marriages as in so many cultures, it is almost impossible for a young girl with extensive Vitiligo to be given in marriage. When there is no opportunity given for courtship and appraisal of a girl. Personal qualification more emphasis must be placed on her out ward appearance, as well as on her family background. Not only that there is also fear that Vitiligo will pass on to the children. The psychological problem arising from the pronounced cosmetic disfigurement of Vitiligo in pigment races are easily understood. It is reported that all human races are affected by Vitiligo, both sex are affected equally, the female prevalence in some studies can probably be attributed to greater concern about cosmetic defeat. Vitiligo may be developing at any age, onset has been repeated from birth 2 to 81 years of age. As vitiligo is the major psychological problem in under develop country like Bangladesh but little is known about it. Therefore the sociodemographic studies on vitiligo would be necessary to determine the effects, extent of distribution and much knowledge about Vitiligo among the people in Bangladesh.

In this study we used 125 vitiligo patients of different age group, sex, occupation, food allergy, itching etc. This demographic study showed that the disease incidence among the 10-20 years age group, female are mostly affected as compare to male. This study also indicated that the middle classes people are mostly affected and the social problem was the major problem of Vitiligo patients. This sociodemographic study would be extent the distribution of knowledge about Vitiligo among the people of Bangladesh.

METHODS

The sociodemographic study was used to determine the effects and extent distribution of vitiligo among the Bangladeshi people. The purpose of this study was explained to each participant and after having received his or her consultation. The survey study carried out on the vitiligo patients were come from Rajshahi and the surrounding district of Rajshahi in Bangladesh such as Natore, Bogra, Nawabganj, Rangpur, Dinajpur, Nilfamari, Pabna, Kushtia, Naogaon. Kurigram, Lalmonirhat and Sirajganj etc. A questionnaire was developed to obtained relevant information of vitiligo patients. The study was carried out among 125 patients who were having depigmented vitiligoinous lesions attending the skin and venereal disease out patient's department of Skin and Venereal disease in Rajshahi Medical College Hospital, Rajshahi, Bangladesh from 2009 to 2011.

A self-administered questionnaire was distributed to the Vitiligo patients, who were likely to be concerned or not about their condition. The doctors those who were involved in the out door of the Rajshahi Medical College Hospital, Dept. of Skin and Venereal disease, were diagnosed the disease.

Description of sample

A total of 125 patients aged below 10 to above 50 were selected for this study whom were attending in the outpatient department of Skin & Venereal disease in Rajshahi Medical College Hospital, Rajshahi, Bangladesh.

Patients were informed about purpose of the study, each patient that is satisfied with participate in the study, signed an informed consent form, they were advised to continue their diet and physical activity habits without any changes during intervention.

The study were carried out by adjusting the patients age, sex and duration of diseases and the studied also randomly divided into intervention and control groups. In this Sociodemographic study, Occupation of patients, Family history, Life living status, Food habits, Social problem, were recorded.

Participants were instructed to complete 24 h dietary recall for three days (2 week days and 1 weekend day) at baseline and the end of study. These records were used to calculate the habitual dietary energy and nutrient intake. International Physical Activity (IPA) questionnaires (Hagstromer *et al*. 2006)[5] were filled out by researcher with face to face interview at the baseline and the end of study.

Statistical analysis

Data are analyzed as Mean±Standard Deviation (SD). Kolmogorov-Smirnov test was used to determine normality of the data. Data with Abnormal distribution were converted to normal distribution by calculating logarithmic ratio. Then data at the end of study were compared to their own baseline values by Paired t-test. Comparison quantitative and qualitative variables between two groups were performed by Student's t-test and exact fisher test, respectively. SPSS version 18 (IBM Inc, USA) was used for data statistical analyses. The $p<0.05$ was considered significance for all variables.

RESULTS

Socio demographic studies of the 125 vitiligo patients were included different parameters such as age distribution, sex incidence, occupation, and family history, subjective symptom like itching, life living style, food allergy and social problem. The participant Vitiligo patients were grouped according to their age and occupation. The results were shown in Table 1 and Figure 1A & 1B. In this study mean age (in year) of the participant were 23.02±11.57 with a range below 10 to above 50 years. The distributions of the 125 Vitiligo patients according to occupation are shown in Table 1

and Figure 1B. There was various occupation types of Vitiligo patients participate in this study. Patients included students, service holder, house wife, businessman and others. The demographic characteristics showed that students were the highest percentage (48%) suffering with Vitiligo. The lowest percentages were observed in businessman and others.

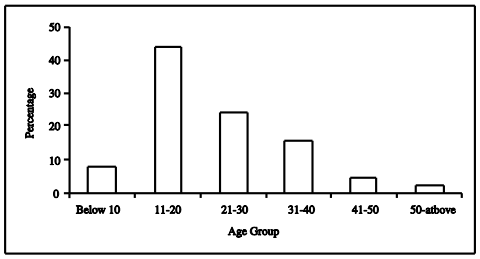
Table1a: Distribution of participant patients by age group.

Age group (year)	No. of Patients	No. of Patients
Below 10	10	08
11-20	55	44
21-30	30	24
31-40	20	16
41-50	06	4.8
50-above	04	3.2

Table1b: Distribution of the participant by occupation.

Occupation	No. of patients	Percentage
Students	60	48
Service holder	25	20
House Wife	30	24
Business man	07	5.6
Others	03	2.4

A.



B.

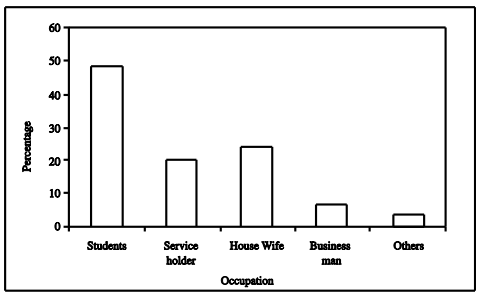


Figure 1: Distribution of the Vitiligo patients according age and occupation. A. Distribution of the Vitiligo patients according age. The longest bar indicates the disease incidence was highest among 11-20 age groups (44%) and the shortest bar indicates the lowest incidence of the disease among above 50 age group (3.2%). B. Distribution of the patients by occupation. The longest bar indicates that students were the highest percentage (48%) suffering with Vitiligo.

The distributions of Vitiligo patients according to sex incidence and family history are shown in Table 2 and Figure 2A & 2B. This studied shown that both sexes are likely affected equally but the highest incidence were recorded in the female patients. The female patients were 56%, whereas the male patients were recorded 44%. Family history was the most important index for the measurement of the incidence of the Vitiligo patients. It is reported the about 25-30% of persons in general developed the Vitiligo with a family history. In this study the Table 2 and Fig. 2B shown that 32% patients were family history among the 125 patients but the rest 68% of the patients had no prior to family history.

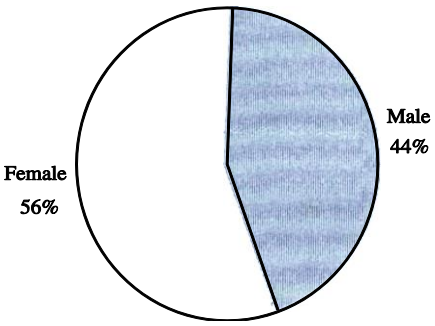
Table 2a: Distribution of the participant patients by sex incidence.

Sex	No. of Patients	Percentage
Male	55	44
Female	70	56

Table 2b: Distribution of the participants by family history.

Family history	No. of Patients	Percentage
Absent	85	68
Present	40	32

A.



B.

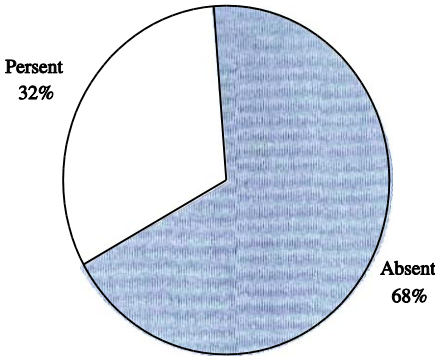


Figure 2: Distribution of the participant patients by sex incidence and family history. A. Distribution of the Vitiligo by sex incidence. The black shade indicates the Vitiligo among the male. The white shade indicates the highest percentage (56%) among the female patients. B. Distribution of the patients by family history. The white shade indicates the 32% patients were family history. The black shade indicates that the 68% patients had no prior to family history.

The distribution of participant patients by location of lesion, subjective symptoms likes itching and food allergy are given in Table 3 and Figure 3A, 3B & 3C. The Table 3 and Figure 3A shown that the highest percentage (68%) of patients had lesion in the exposed parts of the body, like eyes, hand, face, nose, mouth ears, upper part of the chest etc. Rest of 32% patients had lesion in the cover part of the body. Only 16% patients had with subjective like symptom like itching out of 125 and 84% patients had no symptom like itching. These results are shown in Table 3 and Figure 3B. Table 3 and Figure 3C shown that 76% patients had no food allergy but 24% patients said have food allergy.

Table 3a: Distribution of the participants by location of lesion.

Location of lesion	No. of Patients	Percentages
Exposed parts of the body	85	68
Covered parts of the body	40	32

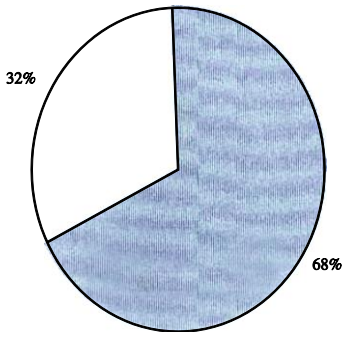
Table 3b: Distribution of the participants by subjective symptom likes itching.

Itching	No. of Patients	Percentage
Present	20	16
Absent	105	84

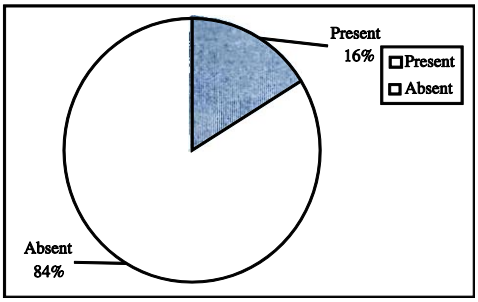
Table 3c: Distribution of the participant patients by food allergy.

Food Allergy	No. of Patients	Percentage
Present	30	24
Absent	95	76

A.



B.



C.

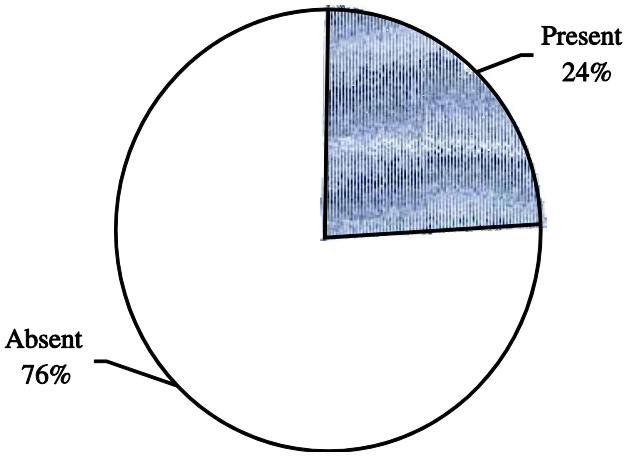


Figure 3: Distribution of the participant patient by location of lesion, subjective symptom like itching and Food allergy. (A) Distribution of the participant patients by location of lesion. The black shade indicates that the highest percentage (68%) of patients had lesion in the exposed parts of the body. The white shade indicates that only32% Patients had lesion in the cover part of the body. (B) Participant patient by subjective symptom like itching. The deep black shade indicates only 16% patients had with itching out of 125 patients. (C) Participant patients by Food allergy. The off white parts indicate that highest percentage (76%) patients had no food allergy.

Demographic structures of living style and social problem of the participant patients are shown in Table 4 and Figure 4A & 4B. In this study, the Table 4 and Figure 4A shown that the maximum patients had living status of middle class (40%) and 12% patients living status was lower class. Rest of the 28% patients living style was upper class and 20% patients was lower middle class. In this study, social problem was the key question. Eighty percent patients said marital relationship is the main problem in the case of Vitiligo disease. These were painful and pathetic experiences, 12% patients said most of the person avoids them, because they knew Vitiligo is an infectious disease. Only 8% patients said nobody avoid them. These results are given below in Table 4a and Figure 4B.

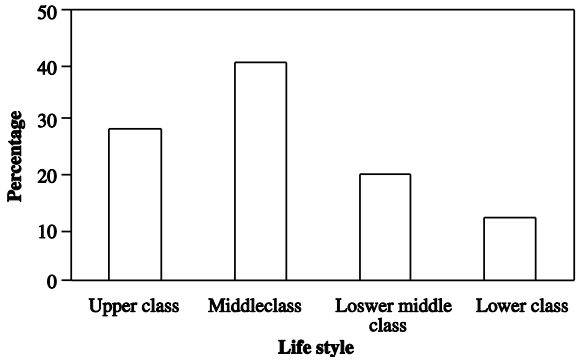
Table 4a: Distribution of the patients by life living style.

Life style	No. of Patients	Percentage
Upper class	35	28
Middle class	50	40
Lower middle class	25	20
Lower class	15	12

Table 4b: Distribution of the participants with social problem.

Social problem	No. of Patients	Percentage
Marital relationship	100	80
Avoidance of contact	15	12
Supportive	10	8

A.



B.

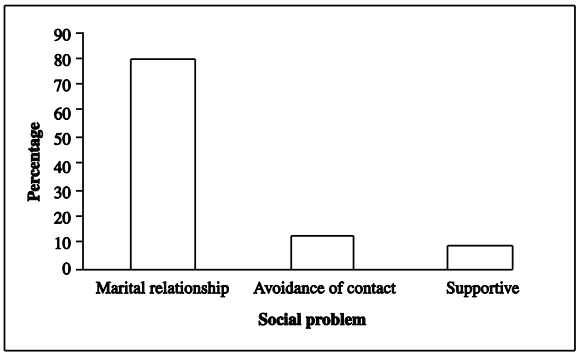


Figure 4: Distribution of the patients by life living style and with social problem. (A) patients by life living style. The longest bar indicates that the maximum patients had living status of middle class (44%). The shortest bar indicates that only 12% patients living status was lower class. (B) Patients with social problem. The longest bar indicates that 80% patients had suffered with marital relationship.

DISCUSSION

As Vitiligo become a social problem in Bangladesh, Therefore the social awareness about the Vitiligo, it is essential to sociodemographic studies on Vitiligo in Bangladesh. In this present study, 125 Vitiligo patients were studied simultaneously. The patient's number is not so small but this study reflected various sociodemographic characteristic of Vitiligo patients in Bangladesh. The sociodemographic analysis reveals that the highest percentage (44%) of patients was suffering in the age between 11-20 years out of 125 patients. This results complies with (Kashem *et al*. 1995)[6] reported that 40-50% patients developed Vitiligo at the age of 10 to 20 years.

By sex incidence both sexes are likely affected equally. In sex incidence 44% patients were male and 56% patients were female. The results of distribution of the occupation almost correlated with others studies (Dutta *et al.* 1969 & Hann *et al.* 1993).[7,8] Students were the highest percentage (48%). It might be the fact that student were more conscious about this disease. Location of lesion have observed highest percentage (68%) in the exposed parts of the body, like eyes, hand faces, nose mouth, ears upper part of the body etc. Family history was the most important survey in this study. From the literature survey about 25-30% of patients with a family history of Vitiligo develop the disorder. In this demographic analysis 32% patients were family history among the 125 patients, which incitement with the results of the previous study (Majumder *et al.* 1993).[2]

Another survey of subjective symptoms like itching, only 16% patients complained this problem. The demographic data shows that maximum patient's life status was middle class. It might be fact that it could be the participation of the middle class patients were higher than others. Food allergy study also established that only 24% patients complained about this problem. This results similar to others research statement (Lerner, 1959 & Dawber, 1970).[9,10]

In this statistical study, social problem was the main answer, there were 80% patients said marital relationship is the main problem in the case of Vitiligo disease. In 1988 from the studied on Vitiligo Jimbow expressed his experience by the way that it was painful and pathetic that 12% patients said most of the persons avoid them.[11] It is also appear from this study that psychological tension, nervousness and depression always bear

continuously with Vitiligo patients. From the present study and available data of others, it has been become evident that Vitiligo is quite prevalent and continues a major psychological health problem in Bangladesh. The present study will be give us the awareness of the Vitiligo patient in Bangladesh and relief their mental peace. It is also mentionable that in this present study on Vitiligo, most of the patients are poor and under qualified. So patients do not come early for treatment. Although this survey result will give the more conscious among the people of Bangladesh. But large scale study is need to find out the total epidemiological aspect of Vitiligo and real weight of public health problem imposed by this disorder and to formulate the total program their management and prevention.

Finally this study concluded that the sociodemographic study on Vitiligo will be encouraging the researchers to investigate the biochemical and others pathological analysis of the Vitiligo in Bangladesh and this study also giving the awareness among the people in Bangladesh that Vitiligo is not an infectious disease.

ACKNOWLEDGEMENTS

The Skin and Venereal Disease department of Rajshahi Medical College Hospital, Rajshahi, Bangladesh and Instituted of Biological Science, Rajshahi University, Rajshahi, Bangladesh.

REFERENCES

1. Koranne RV, Sachidevs KG. Vitiligo. Int J Dermatol 1988;27:676-81.
2. Majumder PP. Pattern of familial aggregation of Vitiligo. Arch Dermatol 1993;129:994-7.
3. Schachter M. Generalized Vitiligo in one of uniovular twins- probable diencep halopituitory syndrome. Neuropsychologic aspects. Am Pediats 1947;169:337-42.
4. Sharquie KE. Vitiligo. Clin Exp Dermatol 1984;9:117-26.
5. Hagstromer M, Oja P, Sjostrom M. The international physical activity questionnaire (IPAQ): A study of concurrent and construct validity. Pub Health Nutr 2006;9:755-62.
6. Kashem Chowdury AM, Zakir Ahmed, Momin A, Maidul AZM, Salauddin A, Akrmullah SM. A study on Vitiligo at Dhaka. Bangladesh J Dermatol Venerol Leprol 1995;12:38-40.
7. Dutta AK, Mandal SB. A clinical study of 650 Vitiligo cases and their classification. Indian J Dermatol 1969;14:103-7.
8. Hann SK, Lee HJ. Segmental Vitiligo: Clinical findings in 208 Patie nts. J Am Acad Dermatol 1993;129:994-8.
9. Lerner AB. Vitiligo. J Invest Dermatol 1959;32:285-91.
10. Dawber RPR. Clinical association of Vitiligo. Postgrad Med J 1970;46:276-82.
11. Jimbow K. Vitiligo: Therapeutic advances. Dermatol Clin 1998;16:399-407.

DOI: 10.5455/2320-6012.ijrms20130517
Cite this article as: Rahman MH, Amin MZ, Rahman M, Satter MA. A demographic study on vitiligo (sheti) in Bangladesh. Int J Res Med Sci 2013;1:123-8.