DOI: https://doi.org/10.54393/pjhs.v3i07.420

PAKISTAN JOURNAL OF HEALTH SCIENCES

https://thejas.com.pk/index.php/pjhs

Volume 3, Issue 7 (December 2022)

Original Article

Relationship of Socioeconomic Status with Special Reference to Leucorrhoea

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ARTICLE INFO

Key Words:

Nutritional Health, Leucorrhoea, Disorder, Socioeconomic

How to Cite:

Altaf, N. ., Yousaf Quddoos, M. ., Mahmood, S., Anees Ur Rehman, M. ., Sami Ullah, T. ., Ainee, A. ., Fatima, A., Kauser, S. ., Yaqub, S. ., & Hussain, A. . (2022). Relationship of Socioeconomic Status with Special Reference to Leucorrhoea: Socioeconomic Status with Leucorrhoea. Pakistan Journal of Health Sciences, 3(07). https://doi.org/10.54393/pjhs.v3i07.420

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Received Date: 8th December, 2022
Acceptance Date: 29th December, 2022
Publication Date: 31st December, 2022

ABSTRACT

Leucorrhoea is a common female problem; recurrent especially in women of reproductive age that may or not be associated with vaginal infection or elevated estrogen levels. It may accompany vaginal discharge, vulvae burning and itching, low backache, pains in lower abdomen and legs, general weakness and loss of appetite. This disorder is associated with psychological, physiological and pathological problems. **Objectives:** To investigate nutritional status of girls having leucorrhoea. The aim of this study was nutritional health status assessment of girls of university with special reference to leucorrhoea. **Methods:** The volunteer girls of sample size 150 were interviewed in the study. For this study leucorrhoea is categorized into 3 group's mild moderate and severe. **Results:** The volunteers were from university of Sargodha between the ages of 16-40. In this study it was observed that out of 150 volunteers 82.5% were leucorrheal and 17.33% were none leucorrheal physiological status of girls were mostly influenced by socioeconomic status like 53.33% girls belong to lower middle income group and physical activity was also a major factor for leucorrhoea like most girls with leucorrhoea have sedentary lifestyle (56.66%). Further it was notice that one of the major causes of severe leucorrhoea was constipation which affects 76.47% girls. **Conclusions:** Leucorrhoea can be reduce or by better our socioeconomic status eating well natural food, reduce tension of income and overcome constipation which is bone of contention. If we stay in nature the diseases will avoid us.

INTRODUCTION

Nutritional health status is performed to asses and understand the changes in human physiology during life cycle. The nutritional health assessment is a good practice of clinic to evaluate the different health parameters. It is depend on the excessivenes and deficiency of nutrient in the body [1]. During the reproductive age (13-44) of female face the lot of problems one of them is Lucorrhoea which may be associated with infection of vigina or caused by estrogen levels increased on the ovulation time. The white color discharge from vigina is called leucorrhoea.after the menses cycle (11-14 days) the quantity of discharge increase also may be in the last days for 4-3 days. Due to different reason of leucorrhoea one is high level of estrogen. Poor hygienic condition in adult may be causes of leucorroea [2]. Discharge of leucorrhea is visible from vigina is little bit sticky, transparent, odorless and slimy in nature [3]. The microbial communities that inhabit the vagina of healthy reproductive age women commonly contain high proportions of *lactobacillus spp*. which are dominated by either *Lactobacillus iners*, *Lactobacillus crispatus*, *Lactobacillus gasseri*, or *Lactobacillus jensenii* [4]. *Candida albicans* is a fungus, which is a part of normal

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flora of mouth, gastrointestinal tract and vaginal mucosa [5]. *Candida albicans* become hyperactive to irradiate the toxins which produce in the result of calcium, iron, vitamins A, B and C deficiency, dressing especially tight clothes, using tight belts, chronic obesity, alcoholic addiction, infectious diseases, cancers, diabetes, use of corticosteroids, antibiotics, anticancer and immunosuppressive drugs. Contraceptives may cause candidiasis by prevailing the natural immunity mechanisms and producing toxins, these elements hyperactivate the normal flora which may move to leucorrhoea [6]. Worldwide leading cause of ill health among women is mainly due to reproductive health problems. An initial symptom of all reproductive tract diseases is abnormal vaginal discharge [7]. Most of the women suffer from leucorrhoea and do not present themselves for seeking medical treatment in early stage as the women has poor understanding regarding leucorrhoea [8]. Some problems occure in social active life, physical and mental activity and status of physiology due to leucorrhea. Some factors causes the leucorrhoea secreation like bad eating habbits, bad diet hectic life style,obesty mostly increasing in developed country [9].

METHODS

The volunteers were girls from University of Sargodha, Sargodha. The volunteers were selected through convenience and purposive sampling technique. The research plan was clarified in detail, and the agreed ones were selected as volunteers by getting their consent form was the part of further studies [10]. The cross sectional study design was adopted for research work which is utilized for estimation of the prevalence of a disease and investigation of causes; establishing links between risk factors and health outcomes or exposures to suspected factors over some period [11]. One hundred and fifty (n=150) girls (75 leucorrheal and 75 non-leucorrheal volunteers) were selected from university of Sargodha, Sargodha [12]. Performa and questionnaire was used for collection of data regarding demographics, anthropometrics, clinical signs and symptoms, family history and medical history [2]. Some parameters of demographic, causes, clinical sign and symptoms related to leucorrhea is used to assessed status of health of nominated volunteers [13]. Some factors of demographic parameters i.e., name, age, socioeconomic status, education, physical activity, and ethnicity, income and contact information were recorded. The questionnaire developed by UWHPRC (2006) was used to get the Physical activity of every volunteer. Clinical signs i.e pale complexion, hair fall, tingling, dyspnea, dysmenorrhea, and symptoms including vaginal discharge (white, yellow or greenish in color), low backache, vulvar itching and burning, abdominal pain, pain in legs, constipation, general weakness and anorexia were recorded [9]. Family Medical history of the selected population was explored. Any disease related to leucorrhoea which may present in their family for this determination a questionnaire was developed [13]. The data on various parameters of students were analyzed by using SPSS-20 (software) mean, standard deviation, ranges, correlation and percentages were worked out [14].

RESULTS

To check the nutritional health status of leucorrheal and non-leucorrheal victims and its correlation with demographics in girls of university of Sargodha, Sargodha. The cross sectional study included demographics questionnaire to assess the health status of volunteers. Results of my study are discussed below: Highly significant association was found between marital status and physiological status as given in Table 1 of frequency distribution. Most mildly suffered were unmarried 43.0 % due to slightly hormonal changes before and after periods. Moderately and severely suffered were married 66.67 % and 33.33 % respectively due to sexual activity and more prevalent to sexually transmitted diseases. The highest percentage of mild, moderate and severe leucorrhoea patients 33.94 %, 58.33 % and 41.18 % had graduation, master and postgraduate level of education respectively. This might be due to the young adults that were consuming fiber less food, like fast and junk foods. This might be due to the postgraduates' were having less time to attention her health. The significant relationship between education and physiological status of volunteers as provided (Table 1).

Marital status	Leucorrhoea				
	Mild F(%)	Moderate F(%)	Severe F(%)	No F(%)	Total F(%)
Married	0(0)	4(66.67)	2(33.33)	0(0)	6(4)
Unmarried	29.86(43)	48(33.33)	27(18.75)	26(18.06)	144(96)
X-squared = 5.3548 df = 3 p-value = 0.1476					
Graduation	37(33.94)	33(30.28)	21(19.27)	18(16.51)	109(72.66)
Master	3(17.65)	5(29.41)	7(41.18)	2.00(11.76)	17(11.33)
Post graduates	3(12.5)	14(58.33)	1(4.17)	6(25)	24(16)
X-squared = 16.798 df = 6 p-value = 0.01005					

Table 1: Marital status, education and physiological status of volunteers

The highest percentage of mild, moderate and severe leucorrhoea patients were from peri urban 37.5 %, rural 42.67 %, urban 25.42 % it might be due to unhygienic conditions. It is expected that sanitation facilities at home in rural areas are less prevalent. Urban women have higher leucorrhoea than rural women it might be due to small houses and poor ventilation system. Correlation between residence and physiological status of volunteers was shown (Table 2).

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Residence	Leucorrhoea				
	Mild F(%)	Moderate F(%)	Severe F(%)	No F(%)	Total F(%)
Peri urban	6(37.5)	6(37.5)	3(18.75)	1(6.25)	16(10.66)
Rural	25(33.33)	32(42.67)	11(14.67)	7(9.33)	75(50)
Urban	12(20.34)	14(23.73)	15(25.42)	18(30.51)	59(39.33)

Table 2: Residence and physiological status of volunteers
X-squared = 17.682, df = 6, p-value = 0.007079

The highest percentage of mild leucorrhoea patients were not using social media 57.14 % moderate and severe leucorrhoea patients were using social media 36.36 % and 19.58 %. Prevalence of non leucorrhoeal which were not using social media were high as compared to those which were using social media at some extent social media have more stimulating factors for female discharge. Association between use of social media status and physiological status of volunteers showed non-significant results (Figure 1).

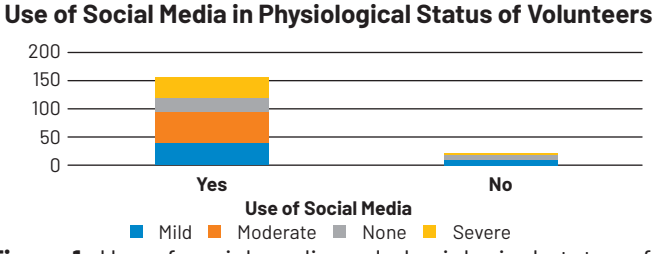

Figure 1: Use of social media and physiological status of volunteers

The relationship between socio economic status and physiological status of volunteers shows nonsignificant results. The above table revealed that almost mild leucorrhoeal patient 37.29% were from middle income while 50% patients suffered from moderate leucorrhoea fall in high income group and 60% severe leucorrhoeal patients were from low income. It might be due to high income class population consume more junks and less physical activity and most of low income class population suffered from lack of adequate diet that's why these two classes of population have more prevalence of leucorrhoea then others. Highly frequent mild leucorrheal were 35.63 % which were happy from her circumstances while highly frequent moderate leucorrheal were 47.83 % which were very happy from her circumstances and highly frequent severe leucorrheal were 33.33 % which were not happy from her circumstances (Table 3).

Socio Economic Status	Leucorrhoea				
	Mild F(%)	Moderate F(%)	Severe F(%)	No F(%)	Total F(%)
High income	1.00(16.67)	3(50)	2.00 (33.33)	0(0)	6(4)
Low income	0(0)	1(20)	3(60)	1(20)	5(3.33)
Lower middle income	20(25)	28(35)	16(20)	16(20)	80(53.33)
Middle income	22(37.29)	20(33.9)	8(13.56)	9(15.25)	59(39.39)
X-squared = 11.826, df = 9, p-value = 0.2233					
Feeling of social circumstances	6(26.09)	11(47.83)	3(13.04)	3(13.04)	23(15.33)
Very happy	31(35.63)	27(31.03)	17(19.54)	12(13.79)	87(58)
Happy	0(0)	0(0)	1(33.33)	2(66.67)	3(2)
Not happy	6(16.22)	14(37.84)	8(21.62)	9(24.32)	37(24.66)
X-squared = 14.02, df = 9, p-value = 0.1216					

Table 3: Socio economic status, feeling of social circumstances and physiological status of volunteers

Time of study effects the health regarding leucorrhoea highly frequent mild leucorrhoea was maximum 33.33 % observed in those students who study at morning time as compared to other timing while moderate leucorrhoea were observed 40.62 % maximum in those who study at night time and severe leucorrhoea were found high frequent 43.75 % who study at mid night. Most highly frequent and severe leucorrhoea were in mid night studying group it might be due to disturbed sleep or less sleeping hours (Figure 2).

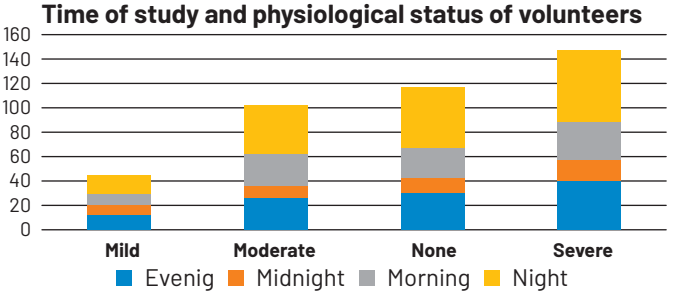

Figure 2: Time of study and physiological status of volunteers

The significant correlation between physical activity and physiological status of volunteers. Most suffered leucorrheal patients were from sedentary 56.66 %, light active were 33.33 %, moderate active 8.66 % and very active 1.33 % were less effective as compared to others. It might be due to less physical activity and more bench work leads to accumulation of toxic substances in body and increasing of adipose tissues (Figure 3).

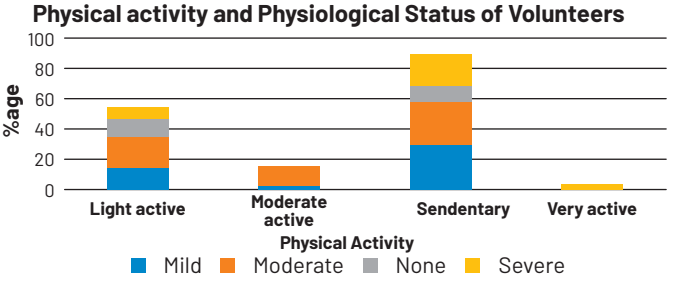

Figure 3: Physical activity and physiological status of volunteers

Mild leucorrhoea 36.67 % were highly prevalent in those girls who had family history of obesity while moderate leucorrhoea were highly prevalent 48 % in stress background girls and severe leucorrhoea 26 % were also

DOI: https://doi.org/10.54393/pjhs.v3i07.420

found in obese family history. My study showed that most of leucorrhoea found in those girls who had history of obesity and had more chances of accumulation of fat or more adipose tissue. While stressed family background also play role in mind and hormonal disturbance which causes severe leucorrhoea. These observations are supported by other researchers. Highly significant correlation between family diseases and leucorrhoea(Figure 4).

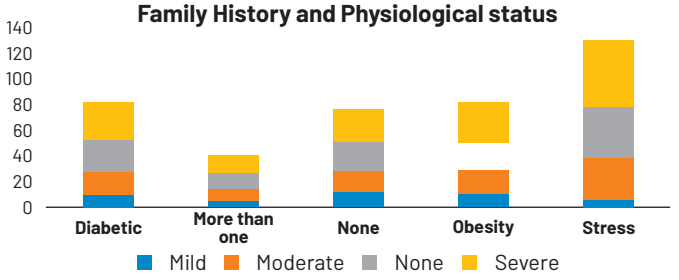

Figure 4: Family history and physiological status of volunteers

Associated symptom of leucorrhoea highly frequent 43.00 % girls were not having anorexia but they had mild leucorrhoea while 40 % were having anorexia with moderate leucorrhoea and 34.48 % were not suffering from anorexia with moderate leucorrhoea in case of severe leucorrhoea 40 % were suffering from anorexia and 18.62 % were not having anorexia but having severe leucorrhoea. In case of moderate and severe leucorrhoea anorexia was highly prevalent it might be due to hormonal disturbance. Affiliation between dysmenorrhea and physiological status was found non-significant. Mild leucorrhoea was highly prevail in 33.33 % who were suffering from dysmenorrhoea while 26.67 % were not suffering from dysmenorrhoea but having mild leucorrhoea. Moderate leucorrhoea was highly prevailing in 37.78 % girls who had leucorrhoea while in severe leucorrhoea 22.22 % girls were suffering from dysmenorrhoea. In case of mild, moderate and severe leucorrhoea highly prevalence was found which relate with dysmenorrhea. It might be due to hormonal disturbance (Table 4).

Anorexia	Leucorrhoea				
	Mild F(%)	Moderate F(%)	Severe F(%)	No F(%)	Total F(%)
No	43(29.66)	50(34.48)	27(18.62)	25(17.24)	145(96.66)
Yes	0(0)	2(40)	2(40)	1(20)	5(3.33)
X-squared = 2.6891df = 3p-value = 0.4421					
Dysmenorrhea					
No	28(26.67)	35(33.33)	19(18.1)	23(21.9)	105(70)
Yes	15(33.33)	17(37.78)	10(22.22)	3(6.67)	45(30)
X-squared = 5.165, df = 3, p-value = 0.1601					

Table 4: Anorexia, dysmenorrhea and physiological status of volunteers

DISCUSSION

According to the table 1 of the frequency of distribution. Most mildly suffered were unmarried 43.0% due to slightly hormonal changes before and after periods. Moderately and severely suffered were married 66.67% and 33.33% respectively due to sexual activity and more prevalent to sexually transmitted diseases. This observation is supported by Kulkarni and Durge the study participants included 506 females, out of which 149 were unmarried and 357 were married [15]. Leucorrhoea was present in 139(27.47%) females. Leucorrhoea was found significantly more in married females as compared to unmarried ($p<0.001$). The highest percentage of mild, moderate and severe leucorrhoea patients 33.94%, 58.33 % and 41.18% had graduation, master and postgraduate level of education respectively and out of total 400 females illiterate were 19.3% primary 41.3% secondary 29.3% higher secondary 5.0 % graduate 5.0 % postgraduate 3% which were facing vaginal discharge problem. The highest percentage of mild, moderate and severe leucorrhoea patients were from peri urban 37.5 %, rural 42.67%, urban 25.42 % it might be due to unhygienic conditions. This observation is supported by Devi in her study out of total 200 patients 60% patients were from rural area while 40% patients were from urban area [16]. Results as given in figure 1. The highest percentage of mild leucorrhoea patients were not using social media 57.14 % moderate and severe leucorrhoea patients were using social media 36.36 % and 19.58 %. Some teenagers accepted the fact that they feel this heavy vaginal discharge when they encounters with erotic feelings and at present age media, magazines, sex videos, TV shows and movies rank as a top source of inducing indecent erotic feelings. Our study indicate highly frequent mild leucorrheal were 35.63% which were happy from her circumstances while highly frequent moderate leucorrheal were 47.83% which were very happy from her circumstances and highly frequent severe leucorrheal were 33.33% which were not happy from her circumstances studies like Gul *et al.*, studied that more than half of the respondents belonged to Upper lower socioeconomic 62.7%. Whereas, 36.8% were from middle class (upper middle: 9.8% and lower middle: 27%) and very few were from upper socioeconomic class. Epidemiological studies among population of Karachi indicate that psychosomatic (women who live under severe stress and worries develop leucorrhoea) were associated with vaginal discharge in the multivariate model. The maximum 33.33 % observed in those students who study at morning time as compared to other timing while moderate leucorrhoea were observed 40.62% maximum in those who study at night time and severe leucorrhoea were found high frequent 43.75% who study at mid night shows in Figure 2. observed that females with sleeplessness were 10% which were having heavy vaginal discharge. Most suffered

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leucorrheal patients were from sedentary 56.66 %, light active were 33.33%, moderate active 8.66% and very active 1.33% were less effective as compared to others. Observed that most common cause of heavy vaginal discharge is unhealthy life style and no regular exercise in age of 31-38 year was 9%. Mild leucorrhoea 36.67% were highly prevalent in girls. These observations are supported by Gul *et al.*, study [17]. Tabassum *et al.*, Studied that common cause of leucorrhoea was unhealthy life style and no regular exercise in age of 31-38 year which contributed 9%. While stressed persons which were suffering from leucorrhoea 19% at the age of 14-40 years and sleeplessness were 10% at the age of 23-40 years. Highly frequent 43.00% girls were not having anorexia but they had mild leucorrhoea while 40% were having anorexia with moderate leucorrhoea and 34.48% were not suffering from anorexia with moderate leucorrhoea in case of severe leucorrhoea 40 % were suffering from anorexia and 18.62% were not having anorexia but having severe leucorrhoea [18]. Observed the symptoms associated with leucorrhoea out of 150 patients 73.33% patients' complaint low backache, 36 % had vulval itching, 12.66% had pain in both legs, 38% had general weakness, 18% had loss of appetite, and 19.33% patients had other symptoms like headache and hair fall. Other studies observed that vaginal discharge with other symptoms were vulval itching 8.8% menstrual problems like dysmenorrhoea, irregularity of menstrual cycle 2.8 %, lower abdominal pain 2.5% [19, 20].

CONCLUSIONS

It was concluded that leucorrhoea can be reduce or by better our socioeconomic status eating well natural food, reduce tension of income and overcome constipation which is bone of contention. If we stay in nature the diseases will avoid us.

Conflicts of Interest

The authors declare no conflict of interest

Source of Funding

The authors received no financial support for the research, authorship and/or publication of this article

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