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THE PATTERN OF SKIN DISEASES AMONG PATIENTS ATTENDING PRIMARY HEALTH CARE CENTERS IN JEDDAH CITY, SAUDI ARABIA, 2012

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ABSTRACT

Aim

The current study aims at widening the scope of understanding factors potentiating the spread of skin diseases from the perspectives of medical geography through studying the geographic distribution of these diseases in Jeddah city in 2012.

Materials and Methodology

Recorded data about skin diseases patients were retrieved from the primary health care centers; it includes demographic characteristics of the patients namely: age, gender, nationality and place of residence. The data was analyzed for descriptive purposes and it was depicted on maps to illustrate the geographic distribution of the patients according to their demographic characteristics.

Results

A total of 3358 of skin diseases cases were seen in the primary health care centers in Jeddah in 2012, which represented 3.8% of attendants. 47% were males and 53% were females. Almost one-third of the patients (32.4%) were aged less than 15 years, and three quarters (76.8%) were aged below 45 years. Saudis constituted the overwhelming majority of the patients (93.7%). The incidence varied between districts; it was higher in the districts known as being of relatively lower socioeconomic status.

Conclusions and Recommendations

Although skin diseases are not seen common among patients attending primary health care centers in Jeddah city, their association with relatively low socioeconomic status indicates that most of these cases could be prevented if their living conditions are improved in addition to modifying their lifestyles, particularly those related to personal hygiene through planned health education campaign.

KEYWORDS: Skin Diseases, Saudi Arabia, Geographic Distribution

INTRODUCTION

Dermatological conditions impose a substantial burden on the global health services in both low and middle income countries[(1)]. Even in developed countries, reports show that approximately one in each three people in the United States encounter a skin condition at any given time which become as one of the 15th top most common groups of medical conditions[(2)]. Although skin diseases are rarely fatal, they can have a significant impact in terms of treatment cost,

absenteeism and psychological distress[3]. The incidence of skin diseases differs widely in various geographical locations, probably due to influence of environmental as well as racial factors. Despite its apparent importance, there are few published reports on the pattern of skin diseases[4-6]. Identification of these factors is very important in preventing the spread of such skin diseases[7]. Moreover, it is necessary for any dermatologist to know the epidemiological background of common skin diseases[6]. The factors responsible for the occurrence and spread out of the skin diseases in resource-poor communities are neither complex nor well identified[8]. Most of these factors are related to social, economic and meteorological correlates; for example, we assume that overcrowding, sharing of beds, frequent population movements, poor hygiene, lack of access to health care, inadequate treatment, malnutrition, social attitudes[9] and climate[10] contribute mainly in the high burden of some skin diseases. These factors emphasize the coexistence of such skin diseases and the link between economic, environmental and behavioral factors. A considerable number of researches analyze the influence of the natural and socioeconomically conditions on the human body. Among various methods used for elaborating the impact of these factors, is the medico-geographical rationalization which was introduced by Keller in 1962[11]; these methods benefitted from the accelerated advancement in medical geography which provided a clearer insight into the role of these factors in the propagation of many health and health related problems[12]. Despite the apparent substantial importance of applying the concepts of medical geography on one of the medical problems which is assumed to be intimately related to the socioeconomic and natural factors namely; skin diseases, there is remarkable paucity in researches dealing with this medical condition from the perspective of medical geography[8]. Accordingly, the current study, in addition to providing closer insight on the factors potentiating the occurrence and dissemination of skin diseases, can be viewed as an addition to the library of medical geography. This study is conducted in Jeddah city that located in the Western region of Saudi Arabia and characterized by hot and humid weather, most of the year. Health services are provided through governmental and private sectors; the governmental services are provided basically through primary health care centers distributed all over the city as almost one center for each district. A retrospective study was carried out where the data of the visits of skin diseases to the primary health care centers were collected along 2012. Data included age, gender and nationality and district. This study is approved by the Jeddah scientific and ethics committee. Qualitative variables are described in frequency distribution; Chi Square test was used to detect significance of the differences in the rate of skin diseases by gender and nationality. For depicting geographic distribution of the cases, ArcGis Ver.9.1 was used.

MAIN RESULTS

Out of all patients who attended the outpatient clinics in the primary health care centers in Jeddah city (n= 954, 663), patients with skin diseases accounted for 33358 (3.8%); It came as the 7th common medical conditions attending the centers. Saudis constituted the overwhelming majority of the patients (93.7%), there was slight preponderance of females over males either among Saudis (52.9%) or non Saudis (51%) with no statistically significant difference $p>0.05$. Almost three quarters (76.8%) of the patients were aged below 45 years and those in the age group (15-<45 years) formed 44.4% of cases (Table 1). To adjust for the differences in the number of individuals according to their demographic characteristics who have a family file, the visits' rate was calculated by dividing the number of skin disease visits in each district by the number of individuals recorded in the population census register in the health center. It was evident that the overall rate of skin diseases visits accounted for 3.4%. By gender and nationality, it was found that the highest rate was reported in non Saudi males (5%) and the lowest rate was reported in Saudi females (3.3%). Regarding

the distribution according to age groups, the highest rate was recorded in the age group between 45-<60 years (4.7%) and the lowest was found in individuals aged 60+ years (2.8%) with a relatively low rates in the age groups (15-<45 years) (3.2%) and age group (5-<15 years) (3.1%) (Table 2) Geographically, the rate was relatively higher in the Southern of Jeddah city with substantially higher frequency in Al Rawabi followed by city center and Al Mahjar district. Except for Al Bawadi district, the Northern of Jeddah showed lowest frequency of skin diseases (Figure 1). There was apparent discrepancy in the proportionate distribution of the recorded cases along districts according to the nationality of the patients. For Saudi patients, the incidence was remarkably higher in Al Rawabi district followed by Al Balad and Al Mahjar. Meanwhile, the non Saudi cases were more widely distributed along the southern part of Jeddah and city center in addition to the northern districts namely Mushrifa and Al Bawadi (Figure 2). Substantially high rates of reported cases among non Saudi males were observed along most of the Southern districts and city center in addition to Mushrifa; and at a lower extent in Bawadi and Rewais. Meanwhile, the highest rate for Saudi males was recorded in Al Rawabi (Figure 3). The distribution of cases among females was slightly different from those among males when putting the nationality into consideration, while the spread of highest rates among non Saudi females was less than that for non Saudi males, the reverse was noted for Saudi females where the highest rates were recorded in city center in addition to Al Rawabi (Figure 4).

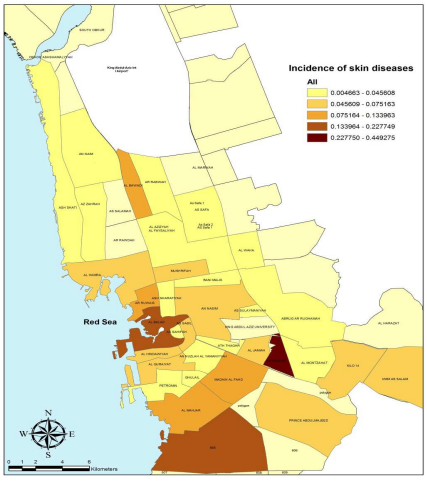
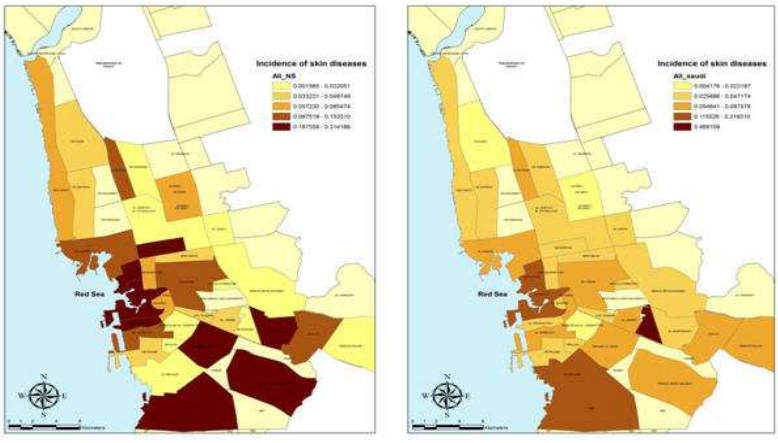
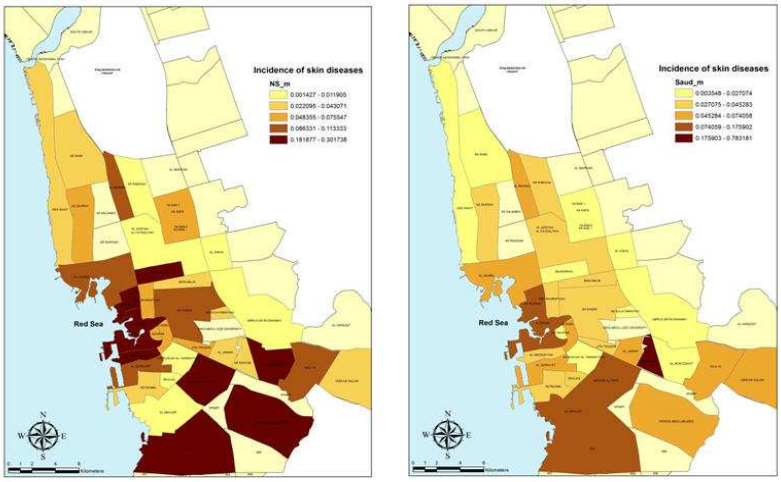


Figure 1: Density of Skin Diseases Cases in Jeddah City, 2012



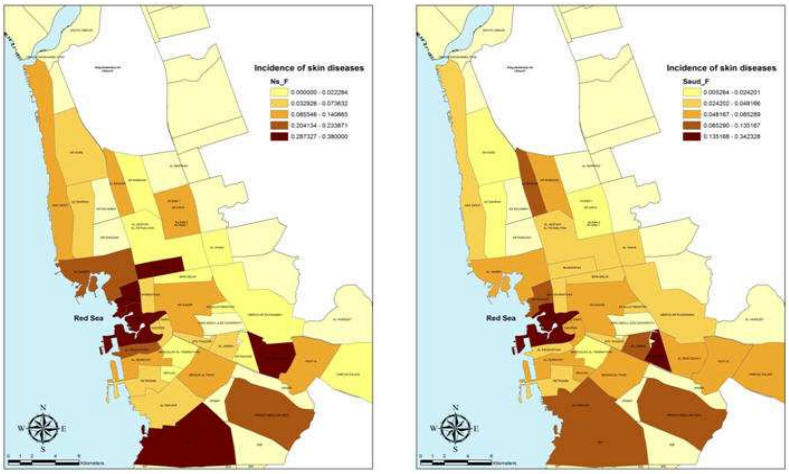
Non Saudi **Saudi**

Figure 2: Rate of Skin Diseases Visits along Districts in Jeddah City by Nationality



Non Saudi males Saudi males

Figure 3: Distribution of Skin Disease Cases in Jeddah Districts among Males by Nationality



Non Saudi females Saudi females

Figure 4: Distribution of Skin Disease Cases in Jeddah Districts among Females by Nationality

Table 1: Demographic Characteristics of the Patients (n=33358)

Demographic Characteristics	Frequency	Percentage
Nationality/Gender		
Saudi (31246; 93.7%)		
Males	14717	47.1
Females	16529	52.9
Non Saudi (2112; 6.3%)		
Males	1034	49.0
Females	1078	51.0
Age Categories		
< one year	1422	4.3
1-<5 years	3011	9.0
5-<15 years	6384	19.1
15-<45 years	14789	44.4
45-<60 years	5819	17.4
60+ years	1933	5.8

Table 2: Incidence of Skin Diseases According to Population Who Have Family Files in the Primary Health Care Center

Demographic Characteristics	Frequency	Population Who Have Family Files	Percentage
Nationality/Gender			
Saudi	31246	928950	3.4%
Males	14717	422966	3.5%
Females	16529	505984	3.3%
Non Saudi	2112	43516	4.9%
Males	1034	20560	5.0%
Females	1078	22956	4.7%
Age Categories			
< one year	1422	31013	4.6%
1-<5 years	3011	89303	3.4%
5-<15 years	6384	204613	3.1%
15-<45 years	14789	455144	3.2%
45-<60 years	5819	124111	4.7%
60+ years	1933	68282	2.8%
Total	**33358**	**972466**	**3.4%**

DISCUSSIONS

The current study is considered as the first to describe the pattern of skin diseases in Jeddah city and Western region in Saudi Arabia from the perspectives of medical geography. Although this study is limited to one source of data, which represented by the attendants of the primary health care centers, we believe that the results represent a rough estimate of the incidence of skin diseases in Western region and that the distribution of skin diseases according to age, gender and nationality reflect the true incidence. There are many factors responsible for occurrence, spread and exacerbation of skin diseases; these factors are mostly related to socio-demographic characteristics in addition to atmosphere. For instance, it had been agreed that there are age specific skin diseases; for example acne vulgaris occurs typically among youth[13]; napkin dermatitis which specifically occur among infants[14] and some types of atopic dermatitis which occur mainly in elderly populations[15]. These differences in the occurrence of peculiar skin diseases among different age groups could explain the variation in the rates of visits with skin diseases according to age groups in our study. The results indicate that skin diseases in Jeddah city are more predominant in women which come in accordance with earlier studies[16,17]. This could be partly due to the greater awareness of Saudi women of health issues in general in addition to their concern about their look; therefore they are concerned with medical advices for any skin disease which jeopardize it e.g. acne vulgaris[18] or it might be attributed to the prevailing skin diseases among females more than males as pediculosis which was documented that the female to male ratio ranged between 2:1 in Australia up to 12:1 in Turkey[19]. The relatively higher rates of visits of patients with skin diseases in the Southern districts could be explained by the fact that the population residing these districts are typically considered as being of low socio economic levels. A considerable number of researches identified links between low socio economic level and increased likelihood of occurrence of skin diseases, as it was cited that the individuals living in low-resource dwellings have a lower standard of living and usually lack access to facilities encouraging their care about personal hygiene[20], overcrowd inside homes, increased number of individuals sharing same beds[9], in addition to accumulation of wastes which represents suitable places for breeding of rodents and insects[21] and all are documented as factors potentiating the occurrence and dissemination of a considerable number of skin diseases. This notion also explains the clustering of non Saudi cases in the

Southern districts and city center, which includes the main commercial part of Jeddah. City center and nearby proximities are considered the most preferable area for non-Saudis to live and work because of low rents and proximity to their work sites[22].

CONCLUSIONS AND RECOMMENDATIONS

Skin diseases come as the seventh top health conditions attending primary health care centers, the frequency of visits was higher among non Saudi males and those who are living in the southern districts and city center where the population are viewed as being of low socioeconomic levels which are usually associated with lower education level, inadequate life conditions and improper personal hygiene. Therefore, deliberate efforts should be made to restructure and improve living condition in the southern areas, also to plan for a health education program targeting the risk groups.

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