

Studying Community Health characteristics and problems of the Population at one region of Sultanate of Oman

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Studying health characteristics of the Community of Sultanate of Oman aimed to identify healthy practices utilizing by Omani population, and identifying the early health problems among population that help in treatment and prevent complication of health problems. Education of population regarding health and illness can help in promoting health and protection from diseases as well as prevention of complication of diseases; this hypothesis will be tested in this study.

A random sample of families from one biggest area of the capital Muscat were surveyed to study community health characteristics and theirs relation of health with health status and problems of the population. Demographical data, nutrition status, immunization, maternal & child health services, environmental and sanitation, health resources and other vital statistical were surveyed as a major community health characteristics. Data were analyzed and interpreted according to the results.

Review of literature

Sultanate of Oman is an Arabic country in the southeastern of the Arabian Peninsula. It has a costal lines extending almost 3165 Km from the strait of Hermes in the north to the borders of the Republic of Yemen, overlooking three seas, Arabian Gulf, Gulf of Oman, and Arabian Sea. Islam is the official religion, although other religions are tolerated under the country's Basic Law. Muslims make up 86% of the population. Indian Hindus account for 13% of the population. There are also small numbers of non-Omani Christians.

The total area of Sultanate of Oman is approximately 309.5 thousands square kilometer. Total population of Oman According to Annual Health Report 2008 was 2,867,428 includes 1,967,180 Omani, and 900,248 non Omanis from different nationalities. Population age 15-60 years old was 45.5% of the total population. 0-5 years old was 11.6%. Over 5 years – less than 15 years 35%. And above 60 years old which is only 3.7%. from the above, data revealed that more of the population were occupied age 0-14 years , followed by age 15-60 years, and then age over 60 years. Sex ratio male per 100 females was 102

but female age from 15-49 years in Omani female was 57.7%. Crude birth rate per 1000 was 27.3, total fertility rate (births per women 15-49 years) was 3.3 and the crude death rate per 1000 population was 303

Sultanate of Oman is administratively divided into 5 Regions and 4 governorates. One of the governorates is Muscat, the capital city of Oman, locate on the Arabian Sea along the Gulf of Oman and it is in the proximity of the strategic Straits of Hormuz, with total population (834,760). The Governorate of Muscat consists of six wilayats.

Health characteristic that were studied are: Demographical data, Nutritional status, Immunization, Maternal and Child care, Environmental Health, and vital statistics and health problems.

1. Demographic data:

Family demography and data

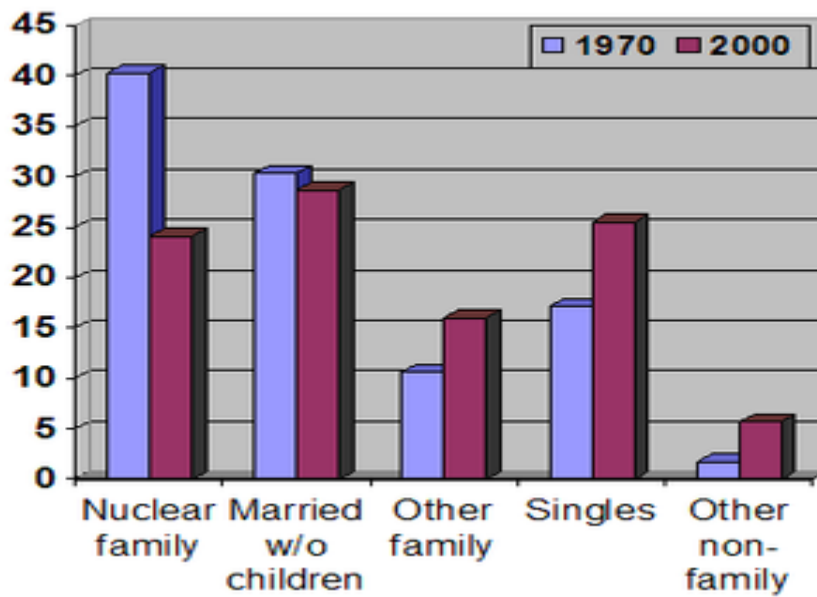
Family is a fundamental social group in society typically consisting of one or two parents and their children. Demography is a study of the structure of families and family-related issues, health, social, and economic status.

The "family" is defined as two or more persons related by blood, marriage, or adoption. Family members use to live in the same residence (Fields and Casper 2001).

Schuster & Ashburn (1986) classified types of families as follows:

1. Nuclear family which is a family unit consisting of the biologic parents and their children (offspring).
2. Extended family that traditionally defined as joint families live in a large single home. The joint family includes the father and mother, sons, grandsons and great-grandsons with their spouses, as well as the daughters, granddaughters and great-granddaughters until they are married - thus often comprising several married couples and their children which often includes multiple generations in the family.
3. Single families: Family consist one parent and children, due to the death of one parent, or divorce and children live with one parent.
4. Others: some families live under one roof share in the living residence and they are from different parents like cousins.

This following figure show the different type of families in Oman according to statistic maintained in 1970 and continue till 2000.



Socioeconomic status

Economic is connected with the supply of money, trade, industry, etc. (Marshall, 1998). A family's socioeconomic status is based on family income, parental education level, parental occupation, and social status in the community. Families with middle to high socioeconomic status have more success in preparing their members with healthy life and opportunity to live secure, support development, and provide their members with high-quality care services, education, and living environment as well better preparing their children for school.

According to the statistics issued by the Ministry of National Economy, the rate of per capita gross national income recorded during the past years has grown steadily, rising from 3440 Riyals in 2003 to 3800 Riyals in 2004 and 4439 Riyals in 2005.

2. Nutritional status

Nutrition: is the sum of food or diet that body utilizes to produce energy, build cells and tissue, regulate function, and creates pleasure. Each Individual's utilization of diet should be balanced. The main sources of nutrition are protein, carbohydrates, fat, vitamins, water and minerals. Promoting good nutrition and dietary habits is one of the most important components of maintaining health.

During childhood period of life, the 1st year of child life is considered as the most important period for normal growth and development. Nutritional status and eating behavior of the family are important for promoting health and preventing diseases. Healthy food helps prevention of constipation, obesity, gastric problems and dental caries in a child. It also helps prevent heart diseases, diabetes, cancer and arteriosclerosis in later life. (www.moh.gov.om)

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The important good nutrition habits in the community are choose eat regular meals and snacks throughout the day and drink more water, eat more fiber, eat less sugar. All this habits help maintain a healthy weight. Foods are divided into 5 main groups, which are grains (and its substitutes), vegetables and fruits, meat (and its substitutes), milk (and its substitutes) and fats. The food items of the same group could be used as exchanges to each other. The following figure shows the healthy food pyramid.



Factors Influencing Nutrition: There are several factors influencing nutrition: Age, lifestyle, culture, food beliefs and habits, religious backgrounds, and economics. These factors and others influence the client's acceptance of dietary recommendations.

Nutrition status of mothers and children

The nutritional problems of mothers and children in the Arab Gulf countries were significant. These countries have experienced a significant improvement in economic and health status; but several nutritional disorders are still prevalent. Iron deficiency anemia and obesity are the main nutritional problems among mothers, while low birth weight, under nutrition, malnutrition (protein Energy Malnutrition PEM), iron deficiency anemia, vitamin D deficiency and dental caries are common problems of Omani children. Health programs in this area should include effective measures to promote nutritional status of mothers and children. (Annual Health Indicator, 2008)

Table # 1 Shows PEM among children below 5 years in Oman. (Annual Health Indicator, 2008)

year	2008	2007	2006	2005	2000	1995
Total of cases of PEM	2.565	4.027	4.703	5.388	4.161	35.604
Death related to PEM	2	5	0	3	0	10

Health and nutritional care should start early even before pregnancy. All girls should be prepared for future reproductive life so that she and her baby would be in good health in the future.

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Child health programs in Oman are considered to be successful. Before 1970, the infant mortality rate was predictable to be 214 out of 1,000 live births declined to 25 by 1992 (www.moh.gov.om). The significance of breastfeeding in the survival and health of the children was known by the health authorities and the Baby Friendly Hospitals I. (BFHI). Breast feeding offers various health advantages to children, mothers, and society.

3. Immunization

Immunization: It is a process by which resistance to an infectious disease is induced or augmented. Immunity can be defined as an ability of the body to resist infection.

Different types of immunity: Natural immunity is one type which is innate immunity or resistance to infection or toxicity. The 2nd type of immunity is acquired immunity is immunity from exposure to organisms or toxin

Childhood Immunization in Oman: Expand Program of Immunization (EPI) in Oman presents the immunization coverage of children aged 0–18 months and then after since 1985 until today. Most children were immunized, 98% of them had three doses of DPT. Oman is now at the forefront of universal childhood immunization. (www.moh.gov.om). The following table shows the types of vaccine and proper age of given.

Table # 2 Shows the appropriate age of children for the mentioned vaccine by WHO.

Age	Vaccine against
At birth	<ul style="list-style-type: none">• Tuberculosis (BCG)• Hepatitis B- First dose (HBV-1)
2 Months	<ul style="list-style-type: none">• PCV-1 (Pneumococcal Vaccine)• Penta-1 (HBV-DTP, Hib) Hepatitis B Vaccin- Diphtheria, Tetanus, Pertussis- Heumophilis Influenza• IPV (Inactivate Polio Virus Injection)
4 Months	<ul style="list-style-type: none">• OPV-1 (Oral Polio Vaccine)• Penta-2 (HBV-DTP, Hib)• PCV-2
12 Months	<ul style="list-style-type: none">• MMR-1 (Measles, Mump, Rubella)• Vit. A 100,000 IU
18 Months	<ul style="list-style-type: none">• OPV- Booster• DTP- Booster• MMR-2• Vit. A 200,000 IU
4-6 Years	<ul style="list-style-type: none">• OPV- Booster• DTP- Booster

(www.moh.gov.om, 2008)

(Annual Health Report 2008)

The aim of EPI in Oman is continues to achieve and maintain high immunization coverage and communicable disease reduction especially among children. The immunization covered 97% for children for all type of vaccine during 2008. (Annual health report 2008)

4. Maternal Child Health (M.C.H) SERVICES:

Antenatal Services:

Antenatal care means the care of pregnant women during pregnancy. This service provides full care for pregnant women. Pregnant women use to receive health care from the period of premarital or pre-conception like the premarital investigation and counseling then throughout pregnancy which compose of the investigation and the assessment finally during the postnatal period in which the women goes under another investigation and measurement. Part of caring of mother and child is importance to emphasizing on the importance of breast feeding and weaning diet.

Antenatal Investigation:-

Antenatal period needs special investigation and this investigation are the bases to evaluate the health status of the pregnant women and her fetus to restore the health of mother and fetus. According to the 2008 statistic of Oman M.O.H, 29.2% of mothers were suffering from iron deficiency anemia. Assessment during follow up visits of pregnant women shows that women will be invited to attend the antenatal clinic monthly on the 1st 28 weeks, then each two week then weekly at 9 months until delivery. At each visit weight, BP, urine analysis, physical examination include abdominal palpation, auscultation of fetal heart and inspection of hands and feet for edema are checked. TT doses (Tetanus Vaccine) are given to pregnant mothers 3 doses during 1st pregnancy, 4th dose one year later, and 5th dose 5-10 years later. Mother at each visit will be encouraged to breastfeed her infant after delivery.

Ministry of Health Annual Statistic 2008 shows that 86.05% of the Omani mothers use to breastfeed their babies exclusively at 1st 6 weeks, and 35.84 % till 6 months.

Health education of mothers regarding breast feeding use to be done often that includes discussion of the advantages of breast feeding which are easily digested, ideal nutrition for baby, more unsaturated fatty acids, reduce allergic responses in infant, and immunoglobulin supply antiviral and antibacterial antibodies to protect baby from certain diseases. Breast feeding prevents Brest cancer of the mothers and has emotional advantages to mothers and babies through strengthen bounding and attachment. Teaching mothers how to consider nutritional requirement and measurement of the babies after 6monthis considered as a part of weaning process. At 6-12 months solid food should be given to babies that include cereal with iron, followed by pureed fruits, then vegetables, then meats. Each new food should be added to the infant's diet separately at interval of (4-7) days to determine food allergies.

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Child Health Services: Child welfare system is a group of services designed to promote the well-being of children by ensuring safety, and strengthening families to successfully care for their children. Also it is protecting children from being abuse or neglect, and to keep families together. Welfare includes child protection and supports for children under adoption. The term “child welfare” covers a multitude of services provided to children to ensure their health, safety, security, and development. It is generally considered as social services and includes daycare, adoption (Orphanages), and child protection. At the child welfare clinic there are a public health nurse and a doctor working for the child and his or her family.

Family Birth Spacing Services:

Birth spacing means allowing three years or more between two children or two pregnancies. And it is an integral part of maternal and child health programs, ensures child survival and well-being and reduces maternal mortality and morbidity. Birth spacing programmed in Oman 1994 and aimed to raise awareness among married couple .its positive effects on the health of the family, mother, and child. (Annual health report 2008).

Table # 3 Shows types, advantage and disadvantage of Birth Spacing Methods

Type	Advantages/Effect	Disadvantages/side effect
Combined oral contraceptive COC	Very low failure rate Does not interfere with intercourse. Easy to stop if pregnancy desired.	Must be taken every day Required regular supply. Interaction with some medication may reduce effectiveness.
Progesterone only pill	No estrogen. Immediate reversibility. Easier to take than combined oral contraceptives.	Menstrual cycle disturbance. Mood changes. Hitruism.
Injection Contraceptives	High effective. <2% failure rate per women/year, only need to remember when to return for the next injection.	May cause amenorrhea Weight gain. Headache Irregular periods or inter-menstrual spotting
Condom	Effective if use correctly	Sensitivity to rubber
Inter-uterine contraceptives device. IUCD	Provides 10 years protection against pregnancy. Immediate retune of fertility after removal. Does not affect lactation.	Need to check the threads monthly after each menstruation. May increase menstrual bleeding and cramps during first period after insertion.

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The main five preferred birth spacing methods used by the Omani women are contraceptive Injection in (31.49%), than Pills in (27.67%) and condoms in (20.35%), COC in (11.89%) followed by IUCD in (8.58). The total number of the women who adopted birth spacing and attended clinics in 2000 was (13982) women and they increased to (16950) in 2008. (Annual Health Report of Oman M.O.H. 2008)

5. Environment: Diarrheal disease among children is one example of diseases caused by water pollution in developing and undeveloped countries. According to the World Health Organization (WHO) in 2005, more than 1.6 million people die each year from diarrhea because of drinking tainted water. Diarrhea causes 15% of all deaths of children under age five in developing countries, and it leaves millions of people with different diseases. The most reliable way to kill microbial pathogenic agents of contaminated water is to heat water, filtrate, chemical disinfection, and expose water to sun and ultraviolet radiation.

Table # 4 Show % population with access to safe drinking water (2000)

Country	%	Country	%	Country	%	Country	%	Country	%
<u>Albania</u>	97	<u>Algeria</u>	89	<u>Azerbaijan</u>	78	<u>Brazil</u>	87	<u>Chile</u>	93
<u>China</u>	75	<u>Cuba</u>	91	<u>Egypt</u>	97	<u>India</u>	84	<u>Indonesia</u>	78
<u>Iran</u>	92	<u>Iraq</u>	85	<u>Kenya</u>	57	<u>Mexico</u>	88	<u>Morocco</u>	80
<u>Peru</u>	80	<u>Philippines</u>	86	<u>South Africa</u>	86	<u>South Korea</u>	92	<u>Sudan</u>	67
<u>Syria</u>	80	<u>Turkey</u>	82	<u>Uganda</u>	52	<u>Venezuela</u>	83	<u>Zimbabwe</u>	83

Diarrheal diseases cause main deaths of children under five years old in developing countries. Malnutrition, especially protein-energy malnutrition, can decrease the children's resistance to infections, including water-related diarrheal diseases.

Water Resources in Oman: Aflaj, wells and dams

1. Oman's aflaj system is water extending from the mountain tops and wadis to populated areas of the land over long distances without using pumps or any other mechanical means.



Figure # 1 Aflaj system

2. Wells are a vital source of water. There are 127,000 wells in the Sultanate of Oman distributed over 128 catchment areas.
3. Dams play an important role in the development of water resources. There are three types of dams. The 1st type is the groundwater recharge dam (there are 25 in the country); the 2nd is the small surface storage dam (currently 58), while 3rd is the flood protection dam of which there are 12.

Pollution and water protection

Water pollution is one of the main concerns of the world today. Many pollutants threaten water supplies in Oman and underdeveloped countries. Sewage, sludge, garbage, and even toxic pollutants are dumped into the water. But the most widespread, especially in Oman and underdeveloped countries, is the discharge of raw sewage into natural water resources, but also is prevalent in quasi-developed countries such as China, India and Iran.

Water Pretreatment

- Water from a chlorinated municipal water supply does not need further treatment when stored in clean, food-grade containers.
- Non-chlorinated water should be treated with bleach. Add 1/8 of a teaspoon (8 drops) of liquid household chlorine bleach (5 to 6% sodium hypochlorite) for every gallon (4 liters) of water. Only household bleach without thickeners, scents, or additives should be used. www.epa.gov/safewater/faq/emerg.html
- Water purification: Water purification is the process of removing undesirable chemicals, materials, and biological contaminants from raw water. The goal is to produce water fit for a specific purpose.
- Disinfection: Disinfection is accomplished both by filtering out harmful microbes and also by adding disinfectant chemicals in the last step in

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purifying drinking water. Water is disinfected to kill any pathogens which pass through the filters.

Housing:

The main building materials used in Oman are from concretes, mud brick, baked brick, stone, mangrove poles, palm trees and lime. Palm trunks are also used for roofing there and for inland parts of the country. The palm-frond house which may take several forms from a single-room temporary dwelling used for the date harvest to a large enclosure incorporating winter and summer rooms.

Waste Disposal: In the UK, approximately 5% of household waste, 7.5% of commercial waste, and 2% of industrial waste is disposed of by incineration. A less common but more sustainable method of waste disposal is anaerobic digestion. Digestion takes place in an oxygen-free environment. And recycling waste. Organic waste breaks down over a few weeks into mulch which can be used as a soil fertilizer. An organic waste breakdown is one of the main methods of disposal management in Oman with advantage to the soil. Dumping and incineration are another two ways of waste management use in Oman.

6. Vital statistic and health problems:

Vital Statistics include the primary records of the number of birth and death (mortality and morbidity), causes of death by ages, marriages and etc... in population. The earliest system of vital statistics was in China, but started early in England. The oldest continuous national records system was in Sweden since 1741. In U.S. government started publishing annual records of deaths at 1900 and births in 1915. The most striking trends shown by recent vital statistics is the rapid increase of population of nonindustrial countries due to sharp decline in mortality and an acceleration of birthrate (United Nations Statistical Office, 1972.). Vital statistics used to monitor population growth through measuring fertility rates.

Table # 5 Shows Vital Statistics of Oman for the year 2008 Published 2008 with total population of Sultanate Oman 2,867,428

Variables	# of cases	%
Birth	46618	1.62
Chronic illness + new discovered cases	16202	0.57
Patients with HIV	1640	0.057
Hospitalizations	241253	8.41
Hereditary diseases only for school aged	500	0.017
Death	3093	0.108
Still birth	447	0.015
Infant death	449	0.016
Maternal death	4	0.0001
Abortion	1347	0.47

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Most of infant death was caused due to their congenital anomalies, causes were unknown for still birth but mostly they considered chromosomal ad heredity disease and most of the cause of death among adult were chronic diseases. In spite of proper maternal care but four women died during pregnancy and labour process.

7. Community Resources:

Health care, education, transportation, and communication facilities are well developed in Oman.

There are many health facilities in Oman; primary health centers, private clinics, dental clinics, private and government hospitals provide health services to all population of Oman.

Educational facilities in Oman represent in schools, colleges, universities, and other institutions that provide educational services to all population.

Most Omani use their private cares for transportation, use planes to transfer to the world, and use ships to transport goods to and from Oman.

Methodology

Sampling:

30 families with 184 members from one area in Muscat, the capital city of Sultanate Oman were interview randomly to fulfill a questionnaire in order to identify community characteristics and health problems of the population in order to intervene early and manage problems. (89) in 48.36% of the populations were male. 59.23% of the population was young at age of 15-45 years. And the lowest group were people at (65) years and older as well as the infants less than 1 year. (32.6%) of the target population were with high school diploma, followed by elementary (15.2%), and primary in (16.3%). People with Bsc. And higher education were formed only (9.78%), while only (7.6%) were knowing how to write and few were illiterate. (66) members of the total target population (184) were at age of labor. (52) out of (66) in (78.79%) were employed and only 21.21% were unemployed which is considered high.

Setting:

The area of the study is one catchment area related to Mattrah Walliyate of Muscat, the capital city of Oman. This area occupied by many families mostly from one big tribe in Oman. The boundaries of the area are; mountains from the north, high building from the south, roundabout in the front, hamper and Honda cars shops for sale from east. Al-Wattayeh health center, Khowula general and Al-Nahdeh ENT from the west. It is considered one of civil area with many shops and restraints and represent most area in Oman. Houses of the area were from concrete and most buildings are in high, small or big houses which were well construct.

Consent Form:

Informed Consent were obtained from Wali (head of the area or Tribe) after he gathered the heads or the fathers of the houses at that area and informed them about the reasons of the study. Oral agreement from the fathers obtained. Therefore the survey was done with out any objection from the target people.

Data collection methods:

A structured interview and observation were used to collect data. Students from Muscat Nursing Institute helped interviewing the target population and helping in filling the questionnaire under the supervision of the researcher.

Tools:

The questionnaire that was used contained questions covered 7 characteristics; which are: Demographical data, nutritional status, immunization, maternal and child care (MCH), environmental sanitations, vital statistics (Health Indicators), and community resources. Each of characteristics divided into subcategories.

Statistical Methods:

Data analysis were beignet with summery statistical. Frequencies and percentiles were used to analyze the data. Average used also which was the best way to summarize group characteristics.

Analysis of the result

Table # 1 Shows out of 132 members of 30 families at marriage age 55.3% were married, 40.9% were singled. And only 1.52% widow and 2.27% divorced.

Table 1 show the marital status of the members of the families N=132

Marital status	frequency	Percentiles
Single	54	40.9
Married	73	55.3
Widow	2	1.52
Divorce	3	2.27

Analysis of Result

This study revealed the following results which were appeared in the following tables and graphs.

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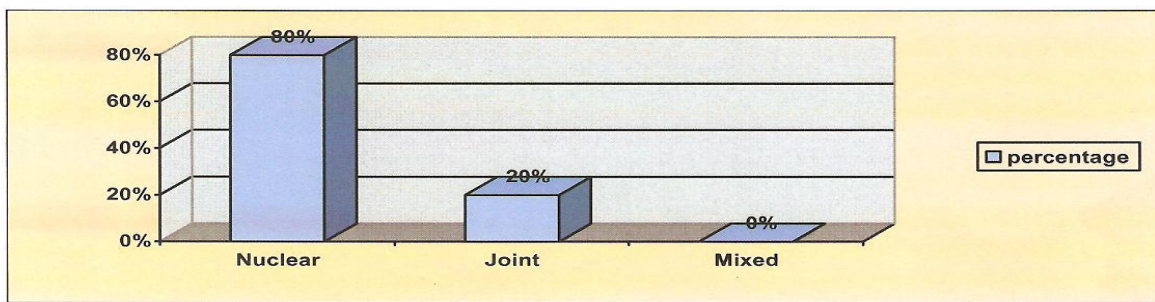
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Table 2: Types of families

1.2.4 Types of families	Frequently	Percentage
Nuclear	24	80%
Joint	6	20%
Mixed	0	0%
Total	30	100%

Most of the families (80%) in Halat Al-Sud are nuclear. There is no mixed family in the sample we take it as it is shown in the figure 1.

Figure 2: Types of families



- ✚ The relationship with neighbors is good for all the families. The neighbors are cooperative and helpful with them. The community in the Halat Al-Sud is very collaboratively and supports each other.

From the above two tables families shows integration and high cohesion, mostly nuclear, with low divorce and widow rates, and with good relation with neighbors.

59.23% of the population was young at age of 15-45 years. Followed by 6-14 in 15.21%, then 1-5 years in 10.32% and the lowest is more than 65 in 3.26, followed by infants less than 1 year in 2.71%.

32.6% of population was with high school diploma, followed by elementary 15.2%, and primary in 16.3%. University only 9.78%, and some in 7.6% know how write and others illiterate. 66 of the total members 184 were at age of labor, and (52) out of (66) in 78.79% were employed and only 21.21% were unemployed.

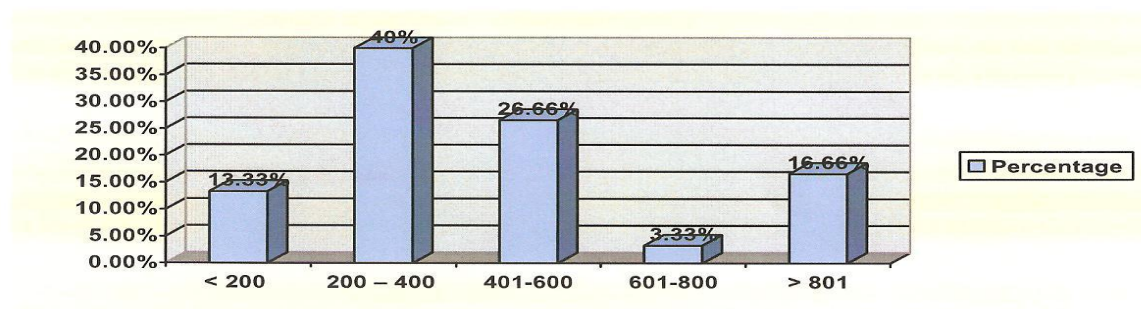
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Tables (3): shows the income status of the families.

1.4.1 Total income of the family (RO)	Frequently	Percentage
< 200	4	13.33%
200 – 400	12	40%
401 – 600	8	26.66%
601 – 800	1	3.33%
> 801	5	16.66%
Total	30	100%

The total income of (40%) is (200-400) RO and the minority (13.33%) were getting less than (200) RO

Figure (3): shows the income status of the families.



- ✚ The sourest of the above families income are as a following: Majority (66.67%) were from jobs. While only (13.33%) were from pension and (20%) were receiving their salary from pension. No families takes income from two sources.

21.21% of the members at age of labour were unemployed. 40% of the families with the income at average 200-400 RO (Ryial Omani), which is considered low in compare to the expense living. 13.33% considered poor with less than 200 RO.

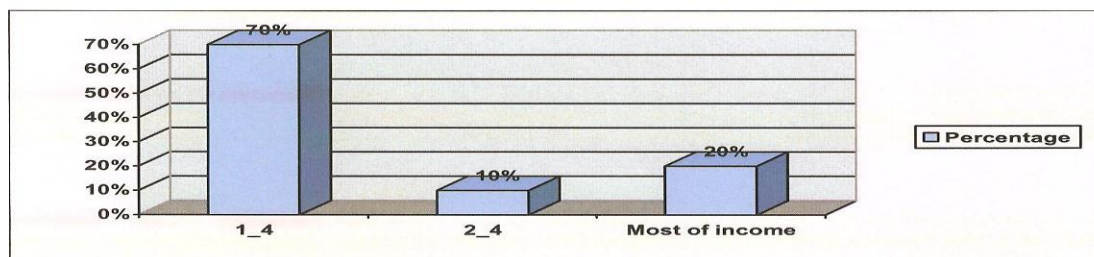
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Table (4) : table shows amount of money spend on food.

Percentage of families budget spent on food	Frequently	Percentage
1/4 of income	21	70%
2/4 of income	3	10%
Most of the income	6	20%
Total	30	100%

In the community of Halat Al-Sud most of the families (70%) spend 1/4 of income for food which is shown in the following diagram.

Figure (4) : Shows the amount of income pending in the food.

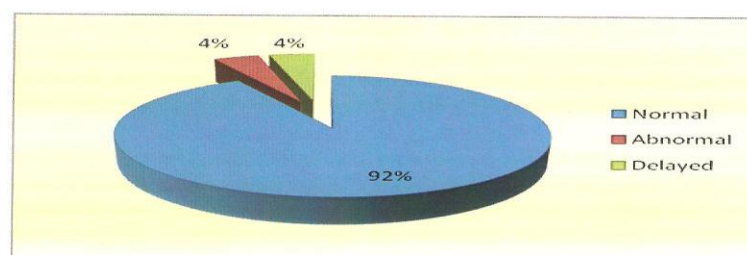


All (30) families stated that the safety and quality of food were adequate. Of them (93.33%) following health habit. While only (7.67%) stated that they use unhealthy habit

70% of the families spend only 1/4 of their income on food which is consider low to enhance healthy nutritional life especially for their children.

The following diagram shows that 10% out of 30 families with antenatal (pregnant) mothers. (92%) are normal and healthy children, while (4%) of children with PMN protein malnutrition, and also (4%) of children were with congenital diseases, out of (24) children from target families who have children all altered the children growth.

Figure#(5) : Shows children with normal and abnormal growth and development



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With in the families of the target area high percentage in 93% consanguinity marriage. Marital marriage can be major causes of some abnormalities of children.

Breast feeding was used in 83% of the mothers who were having children younger than 6 months. 70% of the mothers used to wean their older children at 5 months, and others used to wean their children at 6 months and older.

Birth spacing or family planning was used by 15 in 33.33% eligible couple out 45 eligible couple at 30 families. Health Education from Ministry of Health use to be given to increase women education toward birth spacing to promote maternal and children health.

All mothers and children in 100% were followed immunization schedule from WHO. Children from 1-18 months use to be given all immunization and then after the booster doses. And all mothers use to be given 3 dose tetanus vaccines at 1st pregnancy and followed with booster doses after delivery.

Regarding environmental characteristics, 80% families were living in their owned houses and 20% were living in rented flats of big buildings. All flats and houses were building from concrete. 80% of the family's houses have 2-4 bedrooms and 16.7% with 4-6 bedrooms and all houses with two bathrooms and one kitchen. 30% of the surveyed houses were small and with inadequate places for children to play, area were having park for children to play.

All houses with good ventilation. All families have safe water supply, and got it through pipe line. All houses with electricity and good lighting. Cattles were found only in 6.7% or 2 families which were goats. No pet animals at houses, only cats were at street.

Only 10 % of the houses were elevated, 86.7% houses were at the level of the street, while 3.3% of the houses were damp below the level of street. Al the level of street and damp houses are very dangerous in Oman due to Wadi's water that use to be collected from the surrounding mountains and run in the wadi that flood the area and leave significant damage to houses and peoples.

Sewages in Oman not developed yet. It is started to be constructed and suppose to finish at 2017. So drainage tanks use to drain all houses and building.

Regarding chronic diseases like Diabetic Mellitus and Hypertension as well respiratory illness and Hepatitis as well Aids were shown in the following table.

Table # 6 Shows the most significant cases in the target area: N=184

Chronic Diseases	Frequency	Percentile
No Diseases	126	68.5
Hypertension	17	9.2
Diabetic	25	13.6
Respiratory Asthma	3	1.6
Other Hepatitis and Aids	9	4.9
Heart congenital diseases	4	2.2

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Out of 184 members in the families, 61 in 33.15% were with different diseases. In spite of all health services that use to provided to the target people. The highest was the Diabetic and hypertension the most chronic illness threading all nations. But number of death among the area during the last year were only 2 in 1.08%.

Only 30% of populations were looking positively toward health. Regarding transportation. 83% of the families have their own transportation (own cars).

On the conclusion:

30 families with 184 members from one area of the capital city of Oman were chosen due to it's representation to most area of Sultanate Oman specially at Muscat (the capital city) to study the community health characteristics; demographical, nutritional, immunization, MCH services, environmental, vital statistical, and other community resources, in order to identify health problems and other problems that interfere with the health status of the target population.

Study shows the majority 80% of the families were nuclear with good and cohesive relationship, 93% of the families with consanguinity marriage, most age groups of family members were young adult 15-45 years of old followed by latency. Family members who graduated were mostly with high school diploma. 66% of the target population at labor age were employed, and some use to get their salary from pension. Highest incomes were 200-400 OR which considered not adequate due to living expense. Most families spend ¼ of their income on food. 21.21% of the population at labour age was unemployed. All children were immune according to WHO schedule, and so the pregnant women.

Most women not following birth spacing and like to have more children. All families were living in well concrete constructed houses and flats with good ventilations and electricity. All houses with bedrooms, bathrooms, and kitchen. But it is either with level of the ground mostly with few elevated or damped, which is very dangerous in Oman due to flooding with water from mountains because area is near the wadis.

Diabetic and hypertension are very high among target population same like other area in Oman in spite of all health facilities and education that are available at area. Other diseases also exist which is dangerous to community which are hepatitis and HIV infection. Continues health education are used to be given to Omani population regarding these diseases

This study were accompanied with health education that used to be given to the people regarding all health characteristics by the students of Muscat Nursing Institute under the supervision of the researcher because only 30% of the population believe in health and considered health and sickness are from the God.

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