**Thi-Qar Medical Journal (TQMJ): Vol.(16), No.(2), 2018**
Web Site: https://jmed.utq.edu.iq Email:utjmed@utq.edu.iq

# Demographic and Health Characteristics of Two Populations in Basrah

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## Abstract

**Background:** Measurement of population health is important means to identify a given health status indicators and indicators of the effects of health programmes.

**Objectives:** To measure selected health indicators of the catchment population of two primary health care centres and to support data base for the purpose of better care provision and to compare pattern between urban and rural communities.

**Methods:** A cross-sectional survey involving 557 families (3785 individuals) from two primary health care centres catchment population, namely: Al-Zuwain Village in northern part of Basrah governorate and Hay Al-Muhandisin in Basrah city centre.

**Results:** The main findings were the similarity of age pattern in both populations and the very sharp decline in population share as age advanced. The percent of married persons was high in Al-Zuwain compared to Al-Muhandisin population. Acute illness episodes were equally reported in both population with some variation in some individual disease entities. The use of preventive care was very acceptable and comparable in both populations. The local primary health centre was the main source of curative care in Al-Zuwain but not in Al-Muhandisin population.

**Conclusions:** Household surveys represent a good source of additional information on various aspect of population, they are feasible and of multipurpose approaches to data acquisition. In this study, The overall pattern of services utilization is similar in rural and urban population with few exceptions. However the pattern of morbidity and use of curative care is different.

**Key Words:** Basrah, population health, health indicators, household surveys

## Introduction

Population health is defined as "*the health outcomes of a group of individuals, including the distribution of such outcomes within the group*". [1,2] Population health may be considered as a broad concept encompassing various types of indicators that measure one aspect or another of a population group [2-4]. It is thus a description of the status quo at a point in time and outcome indicators in response to various health improving measures. A group of population may not be fit to describe as healthy or diseased but indicators can be used as proxy measures of population health.

Such concept requires at least three basic components. The first is a primary care centered model that incentivizes all providers to measure their clinical performance at population level. The second is interface between public and private institutions and the third is local community engagement. These three basic components conform to principle elements of the primary health care strategy adopted since 1978. [5]

As a dynamic term, population health is both means and an end. It aims at improving the collective health status of population at large in a given geographical area and can be only accomplished through a combination of behavior change, using a package of appropriate tools and evidence-based medicine focused both on prevention and treatment of injury and disease and on improving function and happiness for the individuals who make up the population.

In Basrah, a network of primary health care centres is operating but the use of services delivered by these centres is variable. In this article we present a summary results of a household survey conducted in two populations; one urban and on rural in nature. The study was justified on the assumption that effective health care planning and delivery requires sufficient, relevant and feasibly gathered data. Routine statistics kept at primary health care centres are not complete. They need to be supported by regular household surveys. This study was done to do that. The main objectives of the study were to measure selected health indicators of the target population and to support available data base on the health of the catchment population.

## Methods

The study was a cross-sectional household survey conducted in two residential areas; one is an urban quarter representing the catchment population of Hay Al-Muhandisin primary health care centre. The second is a rural population representing the catchment population of Al-Zuwain primary health in the north part of Basrah governorate.

A framework was prepared to include an inventory of the houses located within the two designated study areas. A systematic sample was drawn from each population. . Out of the 1200 households estimated to exist in Al-Zuwain village, 181 households were successfully visited and participated in the study. The total individuals identified in these families were 1431. Similarly 376 families with 2354 members were drawn from the population of Hay Al-Muhandisin. Thus the total families studied were 557 with 3785 members at the time of the study. A special questionnaire form was used to collect data on Sociodemographic characteristics, pattern of morbidity and mortality and use of services. The study was ethically approved by the Central Research Committee at Basrah Health Directorate and the Research Ethical Committee at Basrah College of Medicine. It was conducted during 2016-2017. Statistical Package for Social Sciences (SPSS-Version 15) was used for data analysis.

## Results

**Demographic characteristics:** Table 1 shows a comparison between the two study populations in terms of age and marital status. No clear differences could be identified between the two populations with respect to age. In both, a sharp decline in the age relative frequency with advancing age is noticed. Regarding marital status, equal proportions of single persons are seen in both populations. The proportion of married persons is higher in Al-Zwain population (42.4%) compared to Al-Muhandisin population (36.6%). Figure 1 illustrates the comparative relative frequency of age for the two populations.

**Reported acute illness**: Almost equal proportions of the two populations reported an episode of acute illness during a two-week recall periods (13.1 and 13.4% for Al-Zuwain and Al-Muhandisin respectively). The relative frequency of the common acute illnesses reported are shown in Table 2. By far, acute respiratory diseases were the leading condition accounting for 56.7% in Al-Zuwain population and 67.4% for Al-Muhandisin population.

**Table 1:** Distribution of the studied population according to age and marital status by sex. Skin diseases were in clear excess in Al-Zuwain population while diseases of the digestive system were relatively more in Hay- Al-Muhandisin population.

**Use of health care services** (Table 3)

**Preventive health care**: Antenatal care was highly utilized by pregnant women in both populations (88.6% in Al-Zuwain and 85.4% in Al-Muhandisin) but the sources for such care were different. Local primary health centre was the major source in Al-Zuwain population (100% of users) compared to 42.9% in Al-Muhandisin population. Place of delivery was mainly the home in Al-Zuwain population (78.3%) while the hospital was the main place for delivery in Al-Muhandisin population (90.0%). Similarly, birth attendants were different Midwives were the prime attendant in Al-Zuwain while doctors and midwives were the prime attendants in Al-Muhandisin. Immunization coverage was quite high in both populations being 93.5 and 92.9% in Al-Zuwain and Al-Muhandisin in that order.

**Curative care**: Two distinct features can be seen in Table 3. The first is that primary health care centre was the prime source of curative care for acute illness in Al-zuwain as compared to Al-Muhandisin population. The second is that self medication was prevailing in Al-Muhandisin but not in Al-Zuwain population.

**Table 1:** Distribution of the studied population according to age and marital status by sex.

| Age (Yrs) | Al-Zuwain | | Al-Muhandisin | |
|---|---|---|---|---|
| | No. | % | No. | % |
| <5 | 214 | 15.0 | 308 | 13.1 |
| 5-9 | 190 | 13.3 | 373 | 15.9 |
| 10-14 | 190 | 13.3 | 321 | 13.7 |
| 15-19 | 155 | 10.8 | 256 | 10.9 |
| 20-24 | 127 | 8.9 | 181 | 7.7 |
| 25-29 | 114 | 8.0 | 155 | 6.6 |
| 30-34 | 96 | 6.7 | 153 | 6.5 |
| 35-39 | 99 | 6.9 | 172 | 7.3 |
| 40-44 | 84 | 5.9 | 147 | 6.3 |
| 45-49 | 51 | 3.6 | 63 | 2.6 |
| 50-54 | 43 | 3.0 | 69 | 2.9 |
| 55-59 | 16 | 1.1 | 47 | 2.0 |
| 60-64 | 17 | 1.2 | 49 | 2.1 |
| 65-69 | 13 | 0.9 | 29 | 1.2 |
| 70-74 | 11 | 0.8 | 19 | 0.8 |
| 75&above | 11 | 0.8 | 12 | 0.5 |
| Total | 1431 | 100.0 | 2354 | 100.0 |
| Marital status | | | | |
| Children ≤ 10 Years | 403 | 28.2 | 779 | 33.1 |
| Single | 398 | 27.8 | 639 | 27.1 |
| Married | 607 | 42.4 | 861 | 36.6 |
| Divorced | 3 | 0.2 | 23 | 1.0 |
| Widowed | 20 | 1.4 | 53 | 2.3 |
| Total | 1431 | 100.0 | 2354 | 100.0 |

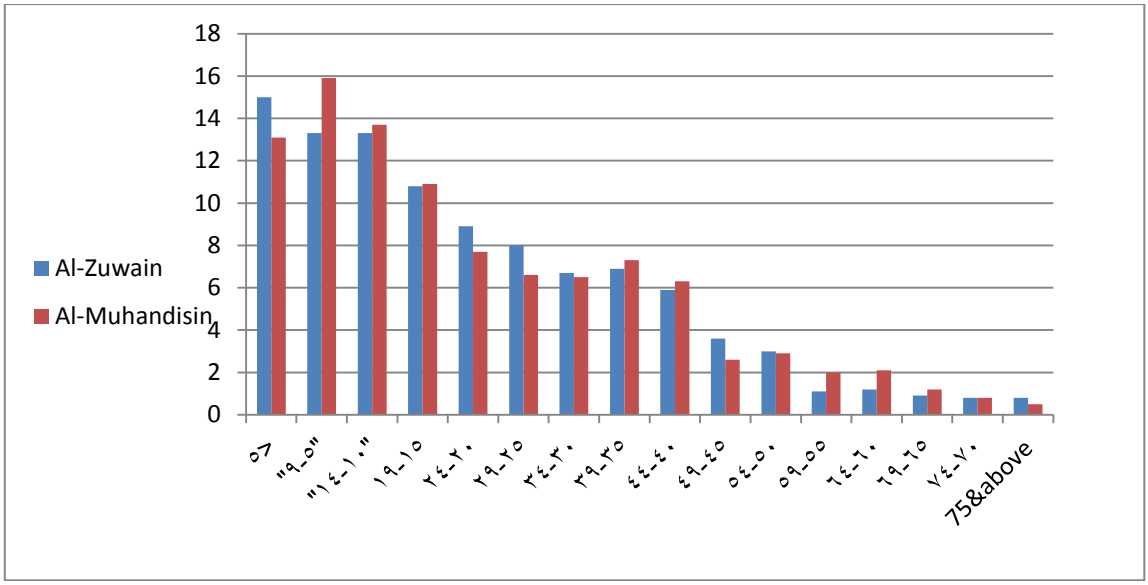


**Table 2:** Acute illness reported during the two week-recall period:

| Nature of reported illness | Al-Zuwain | | Al-Muhandisin | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Respiratory system | 106 | 56.7 | 213 | **67.4** |
| Skin | 24 | 12.8 | 7 | **2.2** |
| Genitourinary system | 15 | 8.0 | 19 | **6.0** |
| Musculoskeletal system | 11 | 5.9 | 15 | **4.7** |
| Digestive system | 10 | 5.3 | 36 | **11.4** |
| Cardiovascular system | 10 | 5.3 | 12 | **3.8** |
| Infections | 5 | 2.7 | 8 | **2.5** |
| All others | 7 | 3.7 | 6 | **1.9** |
| Sub-total | 187 | 13.1 | 316 | **13.4** |
| No acute illness reported | 1244<br>86.9 | 86.9 | 2038 | **86.6** |
| Total | 1431 | 100.0 | 2354 | **100.0** |

**Table 3**: Distribution of live births by selected care variable

| Variable | Al-Zuwain | | Al-Muhandisin | |
|---|---|---|---|---|
| | No. | % | No. | % |
| **Use of antenatal care by current pregnant women** | | | | |
| **Used** | 31 | 88.6 | 35 | 85.4 |
| **Did not use** | 4 | 11.4 | 6 | 14.6 |
| **Total** | 35 | 100.0 | 41 | 100.0 |
| **Source of ANC for users** | | | | |
| **Local PHCC** | 31 | 100.0 | 15 | 42.9 |
| **Others** | 0 | 0.0 | 10 | 28.6 |
| **Both** | 0 | 0.0 | 10 | 28.6 |
| **Total** | 31 | 100.0 | 35 | 100.0 |
| | | | | |
| **Place of delivery for living infants** | | | | |
| **Home** | 36 | 78.3 | 7 | 10.0 |
| **Hospital** | 10 | 21.7 | 63 | 90.0 |
| **Total** | 46 | 100.0 | 70 | 100.0 |
| **Birth attendant** | | | | |
| **Midwife** | 36 | 78.3 | 7 | 10.0 |
| **Doctor** | 10 | 21.7 | 63 | 90.0 |
| **Total** | 46 | 100.0 | 70 | 100.0 |
| **Immunization status** | | | | |
| **Complete schedule up to age** | 43 | 93.5 | 65 | 92.9 |
| **Incomplete** | 3 | 6.5 | 5 | 7.1 |
| **Total** | 46 | 100.0 | 70 | 100.0 |
| **Use of curative care for acute illness** | | | | |
| **Nothing** | 0 | 0.0 | 16 | 5.1 |
| **Self medication** | 3 | 1.6 | 116 | 36.7 |
| **Health centre** | 122 | 65.2 | 111 | 35.1 |
| **Hospital** | 5 | 2.7 | 15 | 4.7 |
| **Private clinic** | 40 | 21.4 | 54 | 17.1 |
| **Others** | 17 | 9.1 | 4 | 1.3 |
| **Total** | 187 | 100.0 | 316 | 100.0 |

## Discussion

Health indicators are quantifiable characteristics of population which researchers use as supporting evidence for describing the health of a population. Surveys are used to gather information about certain people in an attempt to generalize the information collected to the entire populations which are often used to guide health care policy. [6]

The present study was a cross – sectional household survey carried out during 2016-2017 on the catchment population of two primary health care centers. These were Hay AL –Muhandisin in Basrah city and Al-Zuwain in north of Basrah governorate.. The prime aim was to measure certain health indicators of the two population that included demographic characteristics, health status indicators and selected utilization indicators.

Two positive aspects of the survey can be stated here. The first is the face - to-face interview and home visits made by the investigators. This made useful social link between the investigators (who both were staff of the health centres) and the community.

The second positive aspect of the study was the relatively large sample size and the way families were drawn during the process of sampling supported by a high response rate. This helps to provide relatively adequate data, to give an idea about population health and behavior and to strengthen the ties between the health centre as care provider and the population as care consumers. [7,8]

Some sort of bias would be expected in any household study which either be related to sample selection (selection bias) and/or as a result of recall problems (recall bias). It is difficult to measure these sorts of bias. In the present study, they could have been very small in the light of the sampling procedures and the fact that most of variables inquired about were current facts rather than historical in nature. [9]

Regarding the main findings, the present study is in accordance with many other studies which reported a wide variation in morbidity, mortality and differential access and utilization of health care. [6,8,10-12] However, the disadvantages are not necessary always characteristics of rural population. In this study the use of preventive care was almost identical in the two populations. This reflect in its major part the fair distribution of primary health care centres in Basrah. Rural communities in Basrah do not always confer a health disparity particularly with regard to immunization and other components of primary health care services. This was ascertained in the results of the present study. However, the rural community of Al-Zuwain seems at a disadvantage of the care provided to women at the time of delivery. We did not look into other deep socioeconomic details which might be rather different. Differences in health status may reflect socioeconomic and demographic differences across levels of urbanization. [6,8,10]

The results of the present study support the view which is always expressed by us and other public health advocates, that household survey are useful and feasible tools to support primary health care and other policy issues and with other measures may facilitate remedies for the deep rooted discriminating detrimental conditions. [6, 12-14]

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Thi-Qar Medical Journal (TQMJ): Vol.(16), No.(2), 2018
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# الخصائص السكانية والصحية لمجتمعين في البصرة

**عبد الرحيم عبد الامير محمد** **هديل سامي محسن**
**عمران سكر حبيب**

## الخلاصة :

**خلفية**: يمثل قياس المؤشرات السكانية اهمية خاصة لمعرفة الحالة الصحة وتحديد البرامج الصحية وفعاليتها.

**الهدف**: قياس مؤشرات مختارة للحالة الصحية للمجتمع السكاني المخدوم من مركزين للرعاية الصحية الأولية لتعزيز قاعدة البيانات وتطوير الخدمات والمقارنة بين مجتمع حضري وآخر ريفي.

**الطرائق**: مسح أسري شمل ٥٥٧ أسرة (او ما يعادل ٣٧٨٥ نسمة) من منطقتي قرية الزوين شمال البصرة وحي المهندسين في مدينة البصرة.

**النتائج**: تشابه النمط العمري بين المنطقتين مع تناقص كبير في نسبة السكان مع تقدم العمر. كانت نسبة المتزوجين أعلى في منطقة الزوين مما هي في حي المهندسين، اما نمط المرض فكان متشابها على العموم مع بعض الفوارق في أمراض محددة. تميز استخدام الخدمات الوقائية كاللقاحات ورعاية الحوامل بمستوى جيد ومتشابه في المنطقتين أيضا، أما الخدمات العلاجية فكان مصدرها الرئيسي هو المركز الصحي في منطقة الزوين أما في حي المهندسين فقد كانت المصادر الأخرى كالعيادات الخاصة والمستشفيات تمثل مصادر إضافية مهمة.

**الاستنتاج**: أظهرت الدراسة ان المسوحات الأسرية ممكنة ونافعة جدا في توفير بيانات سكانية وصحية متعددة. وكان النمط العام متشابها مع اختلاف متواضع في نمط المراضة واختلاف واضح في نمط استخدام الخدمات العلاجية.

**كلمات مفتاحية**: البصرة، صحة السكان، مؤشرات صحية، مسح أسري.