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Original Article

Impact of family structure and sociodemographic characteristics on parents headed families in Ramadi City, Iraq

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Abstract

Background: Several factors in the family profile contribute significantly to determining the effective policy when heading the family. This study aims to evaluate the sociodemographic and economic burdens on parents-headed families in Ramadi City, west of Iraq.

Methods: A prospective cross-sectional household-based survey was conducted from 1st to 28th February 2019 among Iraqi people residents in Ramadi city, Anbar province. A multistage sampling technique was recruited to identify the eligible sample. A semi-structured questionnaire was used to interview (face-to-face) the respondents. Data from 267 households have undergone univariate and bivariate analyses. Multiple logistic regression, odds ratio (OR), and confidence intervals (CIs) were estimated to explore the predicting variables. The statistically significant is considered at less than 0.05.

Results: The mean age of respondents was 43.88 (± 12.1) years (range: 25 to 69 years). Out of the total surveyed people, 52.8% were young (less than 44 years), male-headed families (59.6%), low educated level (65.5%), unemployed (52.4%), married (67.4%) and headed big families of seven members and above (43.1%). History of chronic diseases and smoking habits was positive among 46.4% and 45.7% of respondents, respectively. Findings of the binary logistic regressions showed that history of smoking (OR = 7.201, 95% CI: 3.254 to15.936), families of 7 members and above (OR = 6.239, 95% CI: 2.938 to 13.250), unhappy (OR = 5.237, 95% CI: 2.140 to 12.818), aged 44 years and above (OR = 3.518, 95% CI: 1.581 to 7.829), being single (unmarried, divorced, widow) (OR = 2.697, 95% CI: 1.230 to 5.914), and had a monthly income of less than USD400 (OR = 2.333, 95% CI: 1.112 to 4.859) are significantly associated with female-headed family.

Conclusion: Priority must be given to some elements such as genetic, physical differences, biopsychosocial factors, and the economic situation when discussing parents' behavior in heading the family.

Keywords: Family Profile, Sociodemographic Factors, Gender, Head of Family, Society, Iraq

Background

The family forms an indispensable unit in building a society in many cultures, especially in Arab communities. Therefore, any society's development depends on the family's success in building its components. The Iraqi family is distinguished by the number of its members and its close association with the restoration of society [1]. However, the rapid developments in technology, accelerated lifestyle changes, successive wars, displacement, malnutrition, unsafe drinking water, and poor medical and healthcare services

Were existential challenges that led to the restructuring of the family entity, such as the early separation of children from the family and appearance of single-head families [2,3,4]. United Nations Development Program (UNDP) reported in 2013 that for every ten Iraqi families, one family is headed by the female gender [5]. Most of these women were either widow, divorced or responsible for caring for their unwell husbands. Iraq's security and economic disturbances burdened poor families and doubled the incidence of chronic diseases. Hussain and Lafta [6] found that the incidence of cardiovascular disease and diabetes had significantly increased after 2003. A report by WHO (2016) found that non-communicable diseases (NCDs) were responsible for about 55.0% of total death among Iraqi

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people in 2016 [7]. NCDs are directly related to the lifestyle and behavior of individuals and society. Bad dietary choices, physical inactivity, heavy smoking, and drug and alcohol addiction are the common predictors of NCDs [8]. The prevalence of obesity (Body Mass Index, BMI ≥30 kg/m2) in Iraq was 66.9% in a national survey (2005–2006) [9] and 33.9% in a 2015 national survey [10]. The trend in Iraq seems higher than the global trend of obesity which reported a male prevalence of 10.8% and a female prevalence of 14.9% [11]. According to the world bank report, the prevalence of tobacco smoking in Iraq was 18.5% in 2020 [12]. There is a noticeable increase in nicotine consumption rates in areas experiencing conflict. The problem of tobacco smoking in Iraq is complicated due to the continuity of internal conflicts for many years [13]. The Iraqi family often witnesses the addition of new individuals to the list of smokers with the deterioration of the economic, security, and service situation. Previous studies have shown the psychosocial and economic burdens of displacement on the Iraqi family, especially when the family must rehabilitate the destroyed house or rent another house [3,4]. Forced displacement with the lack of alternatives to provide safety and suitable living generated unbearable challenges for the head of the family. Many of them were victims of chronic diseases and mental disorders. This study aims to assess the effect of the family structure and sociodemographic factors on the head of a family in Ramadi city, Iraq.

Methods

Study design and population

We conducted a prospective cross-sectional household-based survey from 1st to 28th February 2019 among Iraqi people residents in the Al-Tameem neighborhood in the city center of Ramadi, Anbar province. The sampling method was a face-to-face survey of heads of households using a multistage sampling technique. Ramadi city has sixteen neighborhoods; then, we randomly selected one neighborhood; then, we theoretically divided the selected neighborhood into four quarters; then, from each quarter, we selected eight blocks; and then we selected ten houses from each selected block; then, one head of house interviewed. A well-trained team of interviewers was recruited to explain the objectives and conditions of the study. Moreover, the interviewers assure respondents' freedom to participate or withdraw and that all information and opinions gathered would be anonymous, confidential, and used for the purpose of research". The weekend days (Friday and Saturday) were the favored dates to meet the most eligible house heads.

In some cases, it is agreed with the respondent on the place and the appropriate date for the interview later. The authors ensured supervision during all stages of the study, including the data collection phase. Out of 320 visited households, 290 agreed on the interview. The total population was 267 after excluding 23 uncompleted questionnaires.

Inclusion and exclusion criteria

All Iraqi people, households, both genders, at least 18 years old or older, and willing to participate are included in the study. At the same time, we excluded incomplete data, non-household family members, mentally unstable, and those not willing to participate.

Sample size

The sample size calculator arrived at 264 participants, using a margin of error of ± 6%, a confidence level of 95%, and a 50% response distribution [14]. Non-response correction = 10%. Thus, the total sample size was (264+26) 290. Supervision during the data collection phase was ensured in all stages. After excluding 23 incomplete documents, the sample was 267 for final analysis.

Study instrument

The data was collected using a semi-structured household questionnaire. The English language was used to prepare the questionnaire and then translated into the local native language (Arabic). Content validity was ensured, and Cronbach alpha reliability reached 72.6. A pilot test was performed among fifteen heads of households who were not included in the study. The questionnaire has three components; the first part is the sociodemographic and economic factors. The second part included one closed-ended question used to self-rank the health status. Moreover, a consent form must be signed before heads of households are allowed to participate in the study.

Dependent variable

The dependent variable was the gender of the head of the household as "male" and "female". In our study, the head of the household was defined as the individual who provides support and is responsible for governing a group of family members, such as "dependent children, grandchildren, parents, or other relatives" [15].

Independent variables

For the purpose of analysis, some of the sociodemographic variables were exposed to categorization. The age variable was categorized into two groups codded "one" for respondents aged less than 44 years and coded "zero" for those aged 44 years and above. The health of respondents was categorized as "healthy" and coded "one" and "unhealthy" and coded "zero" Marital status was captured as binary, and a value of "zero" was used for married participants and the unmarried, widows, divorced considered "single" and coded "one". We defined consanguineous marriage as a union (marriage) between two persons who are closely related as second cousins or closer. The head of household with consanguineous marriage was coded "0", and those without were coded "1". The big families having seven members and more (including the parent and grandparents) have been coded with "zero", while the families with less than seven members cod were ed with"1". Chronic disease variable was defined as a condition that "last one year or more and require ongoing medical attention or limit activities of daily living or both" [16] such as dancer, diabetes, high blood pressure, cardiovascular diseases, etc. Respondents with at least one chronic disease were coded "zero," and those with no chronic illness were coded "1". The head of household with a history of tobacco smoking, hookah, electronic cigarette, etc., was coded "Zero," and those with a history of smoking were coded "one". Respondents who described themselves as happy were coded "one," and unhappy respondents were coded "zero". At the time of data collection (1st January 2021), the exchange rate of Iraqi Dinar (IQD)1 = United States Dollar (USD) 0.0008. Therefore, the monthly income (including all incentives

and bounces) of our respondents was coded "zero" for those who earned less than USD 400 (IQD 600,000) and coded "one" for those who earned more than USD 400. The occupation was recorded and coded into "one" for is currently employed (has a fixed employment in the government of private sectors) and the code of "zero" for those currently unemployed.

Statistical analysis

The data were analyzed using IBM SPSS version 16. Categorical variables are presented in terms of frequencies and percentages. Bivariate analyses were performed using the chi-square test for the categorized variables. In the multiple logistic regression, odds ratio (OR) and confidence intervals (CIs) were estimated, and only the variables with a p-value of < 0.05 were recruited to explore the factors that predict female-headed households. The statistically significant is considered at less than 0.05.

Results

Descriptive and general characteristics of related factors

Three hundred and sixty-seven heads of households have been surveyed. The mean age was 43.88 (± 12.1) years, ranging from 25 to 69 years old. Most of the respondents were males (59.6%), aged less than 44 years old (52.8%), married (67.4%), and with a history of consanguineous marriage among 56.6% of them. Most household respondents had a low educated level (65.5%), with big families of seven members and above (43.1%), were exposed to internal displacement (49.1%), and described themselves as unhappy people (68.2%). History of chronic diseases and smoking habits was positive among 46.4% and 45.7% of respondents, respectively. However, 63.3% of them ranked themselves as healthy. Concerning the economic situation, more than half of the respondents were unemployed (52.4%), with a monthly salary exceeding USD 400 (57.7%) (Table 1).

Table 1 Univariate and bivariate analysis of household-related factors (n=367)

Factors	Category	Total (n=267)	Female 108(40.4)	Male 159(59.6)	χ^2	*P*
Age	<44 years	141(52.8)	30(21.3)	111(78.7)	45.60	0.000
	≥44 years	126(47.2)	78(61.9)	48(38.1)		
Health	Unhealthy	98(36.7)	51(52.0)	47(48.0)	8.64	0.004
	Healthy	169(63.3)	57(33.7)	112(66.3)		
Marital status	Single	87(32.6)	50(57.5)	37(42.5)	15.52	0.000
	Married	180 (67.4)	58(32.2)	122(67.8)		
Consanguineous marriage	Yes	112(41.9)	39(34.8)	73(65.2)	2.54	0.111
	No	155(58.1)	69(44.5)	86 (55.5)		
Family members	≥ 7	115(43.1)	83(72.2)	32(27.8)	84.40	0.000
	< 7	152(56.9)	25(16.4)	127(83.6)		
Chronic diseases	Yes	124(46.4)	81(65.3)	43(34.7)	59.46	0.000
	No	143(53.6)	27(18.9)	116(81.1)		
Smoking habits	Yes	122(45.7)	70(57.4)	52(42.6)	26.72	0.000
	No	145(54.5)	38(26.2)	107(73.8)		
Educational level	Low	175(65.5)	67(38.3)	108(61.7)	0.99	0.320
	High	92(34.5)	41(44.6)	51(55.4)		
Employment	Unemployed	140(52.4)	65(46.4)	75(53.6)	4.37	0.037
	Employed	127(47.6)	43(33.9)	84(66.1)		
Happiness	Unhappy	182(68.2)	90(49.5)	92(50.5)	19.23	0.000
	Happy	85(31.8)	18(21.2)	67(78.8)		
Displacement	Yes	131(49.1)	68(51.9)	63(48.1)	14.00	0.000
	No	136(50.9)	40(29.4)	96(70.6)		
Income level	USD≤400	113(42.3)	57(50.4)	56(49.6)	8.12	0.004
	USD>400	154(57.7)	51(33.1)	103(66.9)		

Factors associated with gender in bivariate analysis

Cross tabulation showed that only unhealthy respondents (chi-square test ($\chi2 = 8.64$, $P = 0.004$), who were aged 44 years and above ($\chi2 = 45.60$, $P < 0.001$), being single ($\chi2 = 15.52$, $P < 0.001$), big family of seven members and above ($\chi2 = 84.40$, $P < 0.001$), chronic diseases ($\chi2 = 59.46$, $P < 0.001$), smoking habits ($\chi2 = 26.72$, $P < 0.001$), unemployed ($\chi2 = 4.37$, $P = 0.037$), unhappy ($\chi2 = 19.23$, $P < 0.001$), internally displaced ($\chi2 = 14.00$, $P < 0.001$), and monthly income of USD<400 ($\chi2 = 8.12$, $P = 0.004$) have significantly associated with female gender (table 1).

Factors associated with female-headed households in multiple logistic regression

In the multivariable logistic regressions, the head of household who had a history of smoking (OR = 7.201, 95% CI: 3.254 to15.936) belonged to a big family of 7 members and above (OR = 6.239, 95% CI: 2.938 to 13.250), and rated himself as unhappy (OR = 5.237, 95% CI: 2.140 to 12.818), had the highest odds ratios, respectively. At the same time, the head of household aged 44 years and above (OR = 3.518, 95% CI: 1.581 to 7.829), being single (unmarried, divorced, widow) (OR = 2.697, 95% CI: 1.230 to 5.914), had a monthly income of less than USD400 (OR = 2.333, 95% CI: 1.112 to 4.859) had the lowest odds ratios, respectively. The Hosmer and Lemeshow test indicated a good fit (P = 0.626). The total model was significant (p = < 0.001) and accounted for 63.1% of the variance (Nagelkerke R square = 0.631).

Table 2. Factors associated with female-headed households in multiple logistic regression (n=267)

Variables	Categories	B	S.E.	Wald	P-value	Exp(B)	95% CI
Age	44 years and above	1.258	0.408	9.498	0.002	3.518	1.581-7.829
	Less than 44 years					Reference	
Marital status	Single (divorced, widow)	0.992	0.401	6.135	0.013	2.697	1.230-5.914
	Married					Reference	
Family members	Seven members and above	1.831	0.384	22.700	0.000	6.239	2.938-13.250
	Less than 7					Reference	
Chronic disease	Yes	1.171	0.413	8.057	0.005	3.226	1.437-7.241
	No					Reference	
Tobacco smoking	Yes	1. 974	0.405	23.726	0.000	7.201	3.254-15.936
	No					Reference	
Happiness	Unhappy	1.565	0.457	13.143	0.000	5.237	2.140-12.818
	Happy					Reference	
Monthly Income	Less than USD400	0.847	0.378	5.019	0.025	2.333	1.112-4.859
	USD400 and above					Reference	

Discussion

In this study, we tried to discuss the impact of family structure and sociodemographic factors on the head of household in Iraq. Among 267 surveyed households, 59.6% were male-headed households, and 40.4% were female-headed households. Our finding was incompatible with previous reports of 10.0% and 7.7% female-headed families in Iraq, which have been issued by the United Nation Office for Coordination and Humanitarian Affairs (OCHA), Inter-Agency Information and Analysis Unit (IAU), and MOPDC-CSO (Central Statistical Organization) in 2010, respectively [17,18]. Taking into account the difference in the sample and the region at the local level, the percentage of families headed by females varies greatly at the global level. The past five decades have witnessed a sharp increase and difference in proportions with a difference in societies worldwide [19]. Our study is largely corresponding to the global trend estimating that 33.0%-50.0% of families are headed by females [19,20]. A report from the world health organization [21] indicated that "as people age, they become more vulnerable to diseases and disability".

Similarly, our finding showed that respondents aged 44 years and above were 3.518 times more female-headed than male-headed families. Many Iraqi families had lost their fathers due to repeated wars over the past four decades, which led to a cumulative number of families headed by females. Moreover, logistic regression showed 2.697 times of single (divorced, widow) female-headed families than their counterparts. In fact, recent official statistics showed high divorce rates in Iraqi society; however, most young widows are desirable for marriage, especially by relatives, due to the high percentages of consanguineous marriage, the conservative advantage in Iraqi society, and the keenness to take care of orphans [1]. Therefore, the chances of marriage might be less among widows and divorced women aged forty years and above, especially in large families. An Iraqi family's average number of members is six or seven [1]. Part of our results showed that families of 7 members and above were 6.239 times more female-headed families than male-headed families, which puts an additional burden on the woman's shoulders. Women-headed families suffer daily to provide food, water, education, and health care [22]. The higher the number of family members, the higher the needs and the more difficult administration. Many poor families were forced to allow their young children to work to earn an extra income for the family.

Similarly, our study showed that 2.333 times female-headed families had family income less than USD400 than males. Unfortunately, children are vulnerable to different social problems that may include smoking, drinking alcohol, and even drug use [23]. These problems require radical solutions that are difficult for a family headed by a female. Despite that health status was not a predictor of gender in binary logistic regression, yet, in cross-tabulation, the chi-square test ($\chi 2 = 8.64$, $P = 0.004$) was statistically different in gender. Among 267 surveyed heads of households, 63.3% were healthy, and 36.7% were unhealthy. Similarly, a previous study conducted by Ali jadoo et al. [24] in outpatient clinics in Iraq, found that 46.4% of patients were unhealthy. Moreover, our results found that chronic disease was a predictor factor for gender. Chronic disease was 3.226 times more among female headed families than male-headed families. Previous studies have confirmed that the performance of the family and the management of family problems, such as social, emotional, and behavioral in children, are negatively affected by chronic parental disease [25,26,27,28]. The longer the duration of the disease and its intensity in the parents, the more negative effects on the children [26,27]. Girls are more vulnerable to weak development than boys in families led by chronically ill women [26,28,29]. Unfortunately, most smoking parents lack the real desire to cease smoking. Children are more likely to be exposed to environmental tobacco smoke (ETS) from parents. There is a big gap in prevalence of cigarette smoking between Iraqi males (35.0%) and females 2.0% in 2020 [12]. However, the finding of the current study found that the smoking odds ratio was 7.201 times among female headed families than among males. The desire for smoking arises in both sexes in early puberty due to the influence of peers. However, resorting to smoking in later stages has a direct relationship to the social and economic situation [30]. Several studies have indicated the existence of mental problems in families headed by one of the parents, with a significant increase in the prevalence of psychological problems and depression in families headed by females compared to males [31,32].

Conclusion

More than one-third of surveyed families were low educated, young age and female-headed. History of smoking, families of 7 members and above, unhappy, aged 44 years and above, being single (unmarried, divorced, widow and had a monthly income of less than USD400 were the prominent variables significantly associated with female-headed family.

Abbreviation

OR: Odds Ratio; Cis: Confidence Intervals; NCDs: Non-Communicable Diseases; BMI: Body Mass Index; WHO: World Health Organization

Declaration

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Availability of data and materials

Data will be available by emailing med.badeaa.thamir@uoanbar.edu.iq.

Authors' contributions

All authors have contributed equally in designing, writing, analyzing, interpreting the study, and drafting and reviewing the article. All authors read and approved the final version of the manuscript.

Ethics approval and consent to participate

We conducted the research following the Declaration of Helsinki, and the protocol was approved by the Ethics Committee of the Scientific Issues and Postgraduate Studies Unit (PSU), College of Medicine, University of Anbar (Ref: SR/207 at 21-Jaunary -2019). Moreover, written informed consent obtained from each participant after explanation of the study objectives and the guarantee of secrecy.

Consent for publication

Not applicable

Competing interest

The authors declare that they have no competing interests.

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