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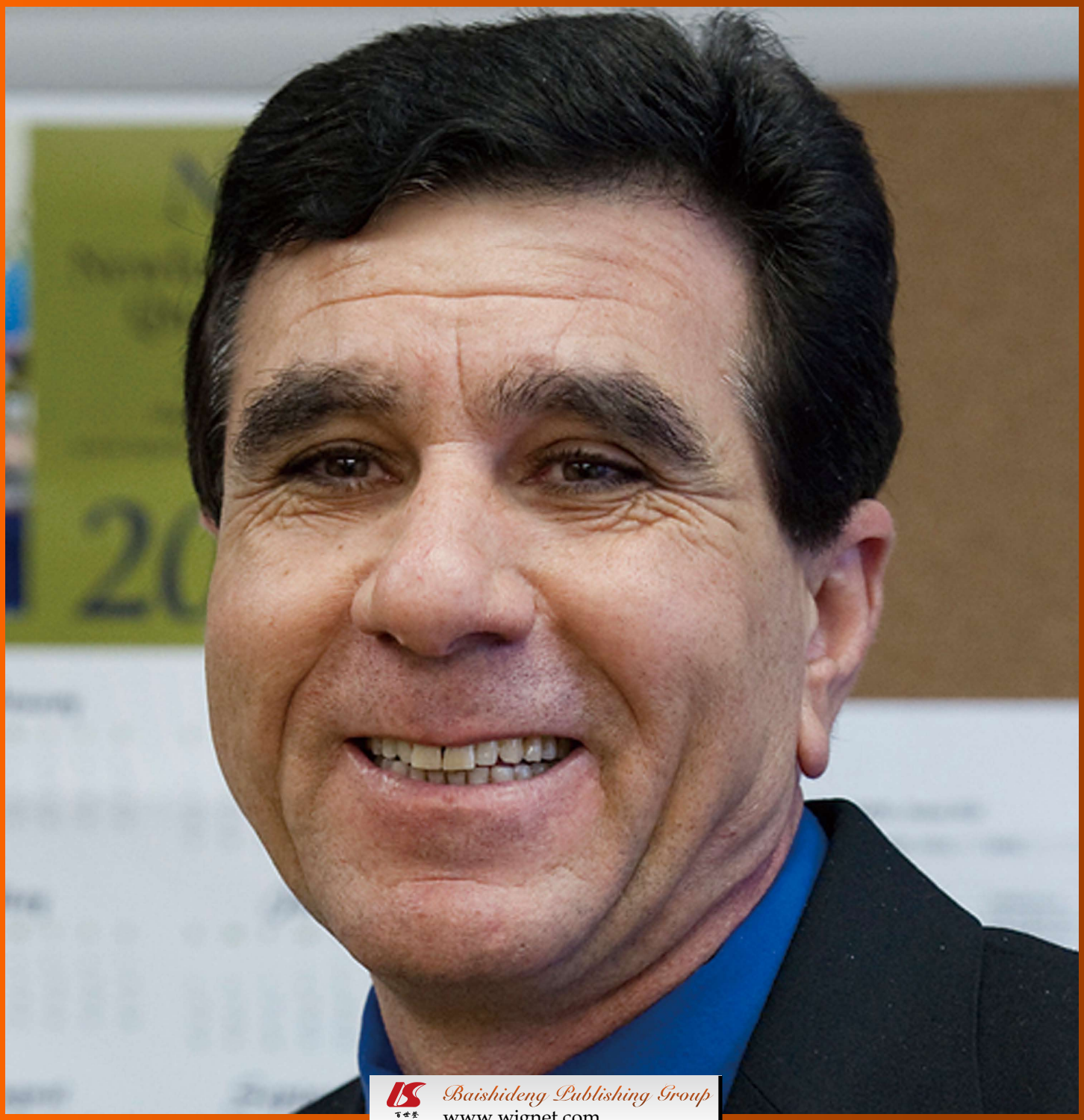

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BRIEF ARTICLE

Mental health and polygamy: The Syrian case

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Abstract

AIM: To examine the psychological, self-esteem (SE), family function, marital satisfaction, life satisfaction and degree of agreement with the practice of polygamy among polygamous women with a control group from monogamous women in Syria.

METHODS: Convenience sample of 136 women, 64 of whom were wives in polygamous marriages and 72 were wives in monogamous marriages participated in this study. A snowball method of sampling was used, conducted by undergraduate local female students trained to collect data according to culturally competent methods. The following research instruments were deployed: the symptoms checklist-90, the Rosenberg SE, the Life Satisfaction, family function and marital satisfaction.

RESULTS: Findings revealed that women in polygamous marriages experienced lower SE, less life satisfaction, less marital satisfaction and more mental health symptomatology than women in monogamous marriages. Many of the mental health symptoms were different; noteworthy were elevated somatization, depression, hostility and psychoticism and their general severity index was higher. Furthermore, "first wife syndrome" was examined in polygamous families, comparing first with second and third wives in polygamous marriages. Findings indicated that first wives reported on more family problems, less SE, more anxiety, more paranoid ideation, and more psychoticism than second and third wives.

CONCLUSION: These results are best understood through consideration of the socio-cultural and economic realities facing these women. Implications for mental health practice, policy and further research are discussed.

Key words: Polygamy; Monogamy; Symptomatology; Self-esteem; Life satisfaction; Family function; Marital satisfaction

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INTRODUCTION

According to the Ethnographic Atlas Codebook[1], of the 1231 societies that were studied, 453 had occasional polygamy, 588 had more frequent polygyny. Specifically, polygamous communities exist in Algeria, Benin, Chad, Congo, Ghana, Togo, Tanzania, Thailand[2], Saudi Arabia, the United Arab Emirates, Egypt, Kuwait, and Jordan, among fringe Mormon communities in the United States of America, and indigenous groups in Canada[3-7]. Moreover, in this era of globalization polygamy is becoming increasingly common in both Europe and North America[8]. Accurate data regarding the scope of polygamy is limited. Nonetheless, it is known that the percentage of younger women (ages 20 to 29 years) involved in polygamous unions in Africa varies widely from nation to nation, from 8% in Lesotho to 35% in Senegal[9].

Historically, many factors have been identified that appear to perpetuate polygamy. According to Dorjahn[10], men may have higher mortality rates than women because of disease, warfare, and the occupational dangers associ-

ated with hunting, ocean fishing, migrant labor, and other activities. One can infer that the higher mortality rate of males may be responsible for an increase in polygamy[11]. One study of the Ngwa Igbo in Nigeria has identified five basic reasons for men to practice polygamy; it allows the Ngwa husband: (1) have as many children as he likes; (2) heighten his prestige and boost his ego among his peers; (3) enhance his status within his community; (4) ensure sufficient working hands to perform the necessary farm work and other labor; and (5) satisfy his sexual urges[12]. In the Middle East, one risk factor for poor mental health among millions of women may be found in the practice of polygamy. Although accurate data regarding its precise prevalence are not readily available, polygamous marriage is known to be a common family structure in the Middle East[13]. One explanation for polygamy in the Middle East is embodied in Islam as a religion that permits a man to marry up to four wives. Pro-polygamy Muslim thinkers insist that men have to be fair to their wives. One aspect of fair treatment centers on spending Al-Qaradawi.

The practical considerations revolving around polygamous families in Muslim Arab society are diverse. Polygamous wives may live together in the same house, or in separate households. A senior wife is defined as any married woman who is followed by another wife in the marriage. A "junior wife" is the most recent wife joining the marriage[14]. This unique family structure forces cooperation between the wives in the household chores and the fields (in rural areas), while they are subject to the husband's authority and in constant competition over his love, attention and financial resources[15,16].

Studies conducted in different countries have shown that polygamy can lead to co-wife jealousy, competition, and unequal distribution of household and emotional resources[17], and generate acrimony between co-wives and between the children of the different wives[18]. They have also shown that polygamy is associated with mental illness (in particular, depression and anxiety) among women and children[15,16]. Chaleby[14] has found a disproportionate number of women in polygamous marriages (mostly senior wives) among psychiatric outpatient and inpatient populations in Kuwait. A recent Turkish study found that the participants from polygamous families, especially senior wives, reported more psychological distress[19].

Al-Sherbiny[5] pointed out that first wives in polygamous families experience a major psychological crisis. Another finding is that women in polygamous marriages report low self-esteem (SE) and less life satisfaction than women in monogamous marriages[3,20,21]. To the best of my knowledge the present study is the first to examine the psychological, SE, family function, marital satisfaction, life satisfaction and degree of agreement with the practice of polygamy among polygamous women with a control group from monogamous women in Syria.

MATERIALS AND METHODS

Sample

The sample consisted of 136 women, 64 from polygamous families and 72 from monogamous families. Sixty-two point five percent of the women from polygamous families were "senior wives" - their husbands' first wives; thirty-four point three were second wives and 3.2% were third wives. Data was collected from Ar-Raqqah, a city in north central Syria located on the north bank of the Euphrates about 160 km East of Aleppo. It is the capital of the Ar-Raqqah Governorate and one of the main cities of the historical Diyār Mudar, which is the Western part of the Jazīra. The modern population is about 191 784 (2008). The data was collected during the summer of 2010. A snowball method of sampling was used, conducted by undergraduate local female students trained to collect data according to culturally competent methods. In order to facilitate the research, the data collectors tended to come from, or near the neighborhoods in which the data was collected. Questionnaires were structured, data collectors were present throughout the interview, while completing the questionnaire forms with the respondent. In cases of limited reading or writing skills the interviewers read the questionnaire to the respondent and filled it in according to the given responses. The data collectors contacted the women prior to the interview and explained to them the goal of the study, the issue of confidentiality and that no identifying information would be used in the study. After receiving the consent of the woman to participate in the study the interview was conducted in a convenient place and during the daytime and while she was alone with no disturbances. All respondents were told that their participation was voluntary and that they could withdraw their consent at any time during the interview.

Research instruments

Socio-demographic variables: The variables were the wife's age, her age at the time of marriage, the wife's education, husband's age when married, husband's education, husband's age, number of children, wife's satisfaction with economic state, type of family (polygamous or monogamous marriage), in polygamous marriages wife's order (first, second, third/fourth), blood relationships between the woman and her husband (endogamous marriage) and degree of wife's agreement with polygamous marriage. It should be noted that all instruments were translated into Arabic and back translated for accuracy of translation.

Family function: The McMaster family assessment device developed by Epstein was used[22]. It has 60 items on these seven dimensions of family functioning: (1) problem solving; (2) communication; (3) roles in the family; (4) emotional involvement; (5) behavior control; (6) emotional responses; and (7) general functioning. All subscales range from 1 to 4, with higher scores indicating more problems in a family's functioning. Section points discriminating between 'clinical' and "normal" families in American populations are available. Previous findings indicated that the scale has satisfactory reliability (Cronbach's α = 0.72-0.92), good test-retest reliability (r = 0.66) and high validity, as indicated by comparing the scale's scores with other measures of the same matters[22]. A recent

study[23] found that the 12 items of the sub-scale "general functioning" give a satisfactory picture of the family's general functioning, and there is no need to use all 60 questions. In the current study I used only the 12 items that assess the family's general functioning. The reliability of the subscale was satisfactory (Cronbach's α = 0.64).

Marital satisfaction: I used the Enrich questionnaire, whose original details were selected following a comprehensive overview of the literature on marital problems and interpersonal conflicts[24]. The questionnaire, which measures satisfaction with marriage and quality of adjustment to it, is divided into eight parts, each containing 10 items. Several studies[24] found that it has a rather high reliability (Cronbach's α = 0.88-0.89). Other studies indicated a high degree of discriminating validity and concurrent validity. Research that used this instrument in Arab society[3] found a satisfactory level of internal reliability (Cronbach's α = 0.96). In this study, we used the shortened version of the ENRICH questionnaire composed by Lavee that includes 10 items, each rated on a Likert scale ranging from 1 (less) to 5 (great satisfaction). The internal reliability of the shortened version among the women in the current study is high (Cronbach's α = 0.80).

SE: The Rosenberg (1979) SE scale consists of 10 items, which range from 1-4, higher scores indicating higher SE. It has high internal consistency (Gutman measurement of reconstruction 0.92) and high test-retest validity (r = 0.85). The SE scale yielded a satisfactory level of internal consistency in the current study (Cronbach's α = 0.71).

Life satisfaction: I used the scale, which consists of five items examining life satisfaction. It uses a Likert scale ranging from 1 (low) to 7 (high satisfaction); the scale has high internal reliability (Cronbach's α = 0.87) and good stability examined by test-retest reliability (r = 0.82)[25]. Diener *et al*[25] tested the validity of the scale by comparing it with existing scales finding good validity. The internal reliability in the current research was satisfactory (Cronbach's α = 0.71).

Symptoms checklist: The symptoms checklist (SCL)-90 is a self-report questionnaire originally oriented towards symptomatic behavior of psychiatric outpatients[26]. It has since been applied as a psychiatric case-finding instrument, as a measure of symptom severity, and as a descriptive measure of psychopathology in different populations[27]. The SCL-90 is intended to measure symptom intensity on nine different subscales: somatization, interpersonal sensitivity, obsession-compulsion, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. The 90 items of the questionnaire are scored on a five-point Likert scale, indicating the rate of occurrence of the symptom during the time reference. The instrument's global index of distress is the global severity index (GSI), which is the mean value of all of the 90 items[27]. Reliabilities of the 9 subscales were satisfactory (Cronbach's α = 0.73-0.80) and the reliability of the GSI was high (Cronbach's α = 0.95).

RESULTS

This section will describe the study results in order to test the study's hypothesis, and will show the differences between the groups (polygamous *vs* monogamous) by using various statistics such as: t-test, χ^2 and linear regression. The section organized by descriptive statistics followed by the differences between the two groups and ends with linear regression, conducted for each of the study's dependent measures. Table 1 represents the demographic characteristics of participants from polygamous and monogamous families. Women from polygamous families, as well as their husbands, were older than woman and husbands from monogamous families. Furthermore, husbands and wives from polygamous families were older at their marriage day compare to husband and wives from monogamous families. No significant difference was found between polygamous women to monogamous women. However, husbands from polygamous families were found to be more educated than husbands from monogamous families. Participants reported more children in polygamous families. Monogamous families were more satisfied from their economic state. Significant difference was found between the two familial structures regarding the women's blood relations to their husband. More monogamous women reported less blood relations with husband compare to polygamous woman. Most of the women in polygamous families were senior wives. In addition, the majority from both familial structures do not agree with the practice of polygamy.

The difference between monogamous and polygamous families in family function, well-being and mental health symptoms were conducted by t-test analysis. The results are presented in Table 2. As demonstrated in Table 2, women from polygamous families did not experience more problems in family functioning compared to women from monogamous families. However, women from polygamous families reported on lower marital satisfaction, less SE and less satisfaction with life. In addition, women from polygamous families experienced more mental health symptoms as indicated by higher levels of somatization, obsession-compulsion, interpersonal sensitivity, depression, hostility, phobic anxiety, paranoid ideation, and psychoticism and their general severity index was higher as well (GSI).

Next, in order to assess the effect of family structure on the research various measures of family and marital function, well-being and mental health symptoms, while controlling for socio demographic variables, regression analysis was used. Family structure was entered as the independent measure while controlling for the effects of age, education and economic state. Regressions were conducted for each of the study's dependent measures. Standardized effects of the independent variables and R-squares are presented in Table 3. The results supported the research hypothesis; family structure was found to be a major predictor of marital relationship, SE, subjective well-being and mental health symptoms. Specifically, it was demonstrated that women from polygamous families

Table 1 Socio demographic characteristics of the sample (mean ± SD)

	Polygamous (n = 64)	Monogamous (n = 72)	Statistical t test value
Age (yr)	41.67 ± 9.22	29.81 ± 8.02	8.03[b]
Age of marriage	20.92 ± 4.30	18.18 ± 2.22	4.75[b]
Husband's age	48.98 ± 11.18	25.19 ± 7.14	8.67
Husband's age of marriage	29.34 ± 7.78	24.39 ± 3.80	4.80[b]
Education	10.02 ± 4.21	9.24 ± 3.08	1.22
Husband's education	10.52 ± 4.90	8.53 ± 4.71	2.39[a]
No. of children	6.61 ± 2.67	4.68 ± 2.02	4.77[b]
Satisfaction with economic state			χ^2 = 9.09[a]
Highly satisfied or satisfied	39.10%	54.20%	
Moderately satisfied	46.90%	4.40%	
Unsatisfied or highly unsatisfied	14.00%	1.40%	
Kind of blood relations with husband			χ^2 = 10.60[a]
None	31.30%	50.00%	
Father's side	23.40%	27.80%	
Mother's side	10.90%	4.20%	
Both sides	18.80%	11.10%	
Distant	15.60%	6.90%	
Wife's order			
First	62.50%		
Second	34.30%		
Third	3.20%		
Agreement with polygamous marriages			χ^2 = 6.10
Don't agree	76.60%	87.50%	
Agree under certain circumstances	18.80%	12.50%	
Agree	4.60%	0.00%	

[a]P < 0.05, [b]P < 0.01 between monogamous and polygamous.

Table 2 Familial structure differences in family function, well being and mental health symptoms (mean ± SD)

	Polygamous (n = 64)	Monogamous (n = 72)	t value
Family functioning (FAD)	2.34 ± 0.38	2.33 ± 0.42	0.12
Marital relationship (Enrich)	2.92 ± 0.60	3.39 ± 0.57	3.91[b]
Self esteem	2.61 ± 0.41	2.98 ± 0.38	5.45[b]
Life satisfaction (SWLS)	3.72 ± 1.18	4.65 ± 0.89	5.03[b]
Mental health (SCL-90)			
Somatization	2.06 ± 0.39	1.64 ± 0.67	4.47[b]
Obsessive-compulsive	2.10 ± 0.38	1.84 ± 0.71	2.71[b]
Interpersonal sensitivity	2.18 ± 3.78	1.92 ± 0.74	2.59[a]
Depression	2.11 ± 0.34	1.78 ± 0.66	3.68[b]
Anxiety	1.91 ± 0.26	1.81 ± 0.72	1.07
Hostility	2.22 ± 0.49	1.84 ± 0.74	3.56[b]
Phobic anxiety	2.09 ± 0.41	1.71 ± 0.79	3.58[b]
Paranoid ideation	2.17 ± 0.36	1.83 ± 0.67	3.75[b]
Psychoticism	2.08 ± 0.35	1.71 ± 0.75	3.72[b]
Additional items	2.17 ± 0.41	1.95 ± 0.66	2.29[a]
GSI	2.10 ± 0.46	1.79 ± 0.62	3.81[b]

[a]P < 0.05, [b]P < 0.01 between monogamous and polygamous. FAD: Family assessment device; SWLS: Satisfaction with life scale; SCL-90: Symptom checklist-90; GSI: Global severity index.

experienced less marital satisfaction, lower SE and less life satisfaction compared to monogamous women. Furthermore, polygamous women were found to have more mental health problems. Specifically, polygamous women experienced more somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. In addition, the GSI of polygamous women was higher than the GSI of monogamous women, indicating that polygamous women experienced more mental health symptoms.

Several of the socio-demographic variables were found to be associated with the research dependent variables. Women's age was positively associated with marital satisfaction and anxiety. More educated women experienced less phobic anxiety, paranoid ideation and psychoticism. Higher economic state predicted less family problems and less mental health problems.

Lastly, I examine the "first wife syndrome"; accordingly, in polygamous families first wives should experience greater psychological and mental health problems. To test this syndrome we compared between first wives to second and third wives in the polygamous families. As presented in Table 4, t-test analyses indicated that first wives reported on more family problems, less SE, more anxiety, more paranoid ideation, and more psychoticism.

DISCUSSION

The present study reveals significant differences between women in polygamous and monogamous marriages in the following parameters: Marital satisfaction, SE and life satisfaction, indicating less subjective well-being for polygamous women. Likewise, as indicated in Tables 2 and 3, many of the mental health symptoms were more common for polygamous women; particularly noteworthy were somatization, obsessive compulsive, interpersonal sensitivity, depression, hostility psychoticism and the GSI. Findings from the current study regarding polygamy among Syrians' women is consistent with previous studies conducted

Table 3 Family structure and socio-demographic variables as predictors of the study's dependent measures: Standardized regression effect and *R*-square

	Family structure	Age	Education	Economic state	*R* square
Family functioning (FAD)	0.03	-0.04	0.02	-0.25[b]	0.058
Marital relationship (Enrich)	0.20[a]	0.23[b]	0.01	-0.06	0.160[b]
Self esteem	0.38[b]	0.05	0.02	-0.04	0.183[b]
life satisfaction (SWLS)	0.35[b]	0.09	0.06	0.06	0.158[b]
Mental health (SCL-90)					
Somatization	-0.48[b]	0.11	-0.16	-0.32[b]	0.255[b]
Obsessive-compulsive	-0.33[b]	0.10	-0.06	-0.17	0.095[a]
Interpersonal sensitivity	-0.32[b]	0.08	-0.11	-0.18[a]	0.103[b]
Depression	-0.42[b]	0.08	-0.03	-0.26[b]	0.158[b]
Anxiety	-0.25[b]	0.23[a]	-0.18	-0.19[a]	0.141[b]
Hostility	-0.36[b]	-0.02	-0.08	-0.27[b]	0.155[b]
Phobic anxiety	-0.40[b]	0.12	-0.20[a]	-0.23[b]	0.192[b]
Paranoid ideation	-0.39[b]	0.07	-0.25[b]	-0.22[b]	0.210[b]
Psychoticism	-0.39[b]	0.08	-0.19[a]	-0.19[a]	0.175[b]
Additional items	-0.31[b]	0.15	-0.11	-0.18[a]	0.103[b]
GSI	-0.44[b]	0.12	-0.15	-0.26[b]	0.200[b]

[a]$P < 0.05$, [b]$P < 0.01$ between 0-polygamy, 1-monogamy. FAD: Family assessment device; SWLS: Satisfaction with life scale; SCL-90: Symptom checklist-90; GSI: Global severity index.

Table 4 First wives to second and third wives differences in family function, well being and mental health symptoms

	First wives (n = 40)	Second and third wives (n = 24)	t value
Family functioning (FAD)	2.48 ± 0.41	2.27 ± 0.36	2.17[a]
Marital relationship (Enrich)	3.34 ± 0.61	3.49 ± 0.53	0.82
Self esteem	2.87 ± 0.50	3.07 ± 0.27	2.01[a]
Life satisfaction (SWLS)	4.61 ± 0.98	4.74 ± 0.74	0.56
Mental health (SCL-90)			
Somatization	1.68 ± 0.65	1.64 ± 0.69	0.24
Obsessive-compulsive	1.98 ± 0.57	1.78 ± 0.77	1.12
Interpersonal sensitivity	2.09 ± 0.61	1.82 ± 0.80	1.40
Depression	1.94 ± 0.55	1.70 ± 0.70	1.45
Anxiety	2.00 ± 0.60	1.70 ± 0.77	2.00[a]
Hostility	1.94 ± 0.72	1.80 ± 0.77	0.72
Phobic anxiety	1.87 ± 0.73	1.65 ± 0.84	1.11
Paranoid ideation	2.03 ± 0.62	1.71 ± 0.68	2.19[a]
Psychoticism	1.92 ± 0.68	1.59 ± 0.78	2.18[a]
Additional items	2.05 ± 0.60	1.92 ± 0.70	0.79
GSI	1.94 ± 0.51	1.72 ± 0.67	1.38

[a]$P < 0.05$, [b]$P < 0.01$ between first wives, second and third wives. FAD: Family assessment device; SWLS: Satisfaction with life scale; SCL-90: Symptom checklist-90; GSI: Global severity index.

in UAE, Kuwait, Egypt, Jordan, the Gaza Strip, Arabs in Israel, Palestine and Turkey which point out that the wives in polygamous marriages have reportedly more psychosocial, familial and economic problems compared to their counterparts from monogamous families[4,14,20,28]. A recent Turkish study found out that the participants from polygamous families, especially senior wives, reported more psychological distress[19]. A study conducted in Egypt found that following their husbands' second marriage, senior wives in polygamous families experience a major psychological crisis, which manifests itself in somatic complaints as well as in psychological symptoms such as anxiety, depression and irritability. Following this finding the author suggests the generation of a new cultural specific psychiatric diagnosis, the "First Wife Syndrome"[5]. Furthermore, in polygamous spousal relationships, it is quite commonly reported that the patriarchal nature of polygamy leads not only to women's subordination, but also to their sexual, physical and emotional abuse at the hands of their husbands[8].

The economics of polygamy are particularly problematic. The level of Syrian economic development is very low. Even in the oil rich Persian Gulf region Al-Toniji[29] found that 75% of the participants agreed that the polygamist husband faced economic problems due to the need to pay for two houses. Nevertheless, there are demographic imperatives that occasionally encourage the practice[28]. Polygamy's evident characteristic of competition and jealousy among co-wives is commonly observed within plural marriage communities[30-32]. This seems predictable, as co-wives are likely to have very limited private time with the lone husband they share, and thus might vie for his attention and favor. In some polygamous communities, women's self-worthiness is linked to the number of children they bear and, therefore, having time with their husband is also critical to promote their status within the family and community[33]. Studies showed that in certain contexts, jealousy between co-wives can escalate to intolerable levels, resulting in physical injuries sustained by the women, and suicide attempts amongst the women. Families living together in crammed and overcrowded conditions, can create an environment that aggravates stress and conflict between co-wives[34]. Previous research reveals significant implications regarding children's lower academic achievements, and men's psychological problems, amongst polygamous marriages[20]. The practice has implications for entire familial structures, and for current and future families and communities.

Results of the current study supported the "First Wife Syndrome"[5] wherein first wives in polygamous families experience a major psychological crisis that manifests

physically as well as psychologically. Indeed the present findings show that first wives in polygamous families experience more anxiety, paranoid ideation and psychoticism compare to second and third wives. Moreover, first wives also reported on more family problems and less SE than second and third wives. Women in the Arab world are more likely to experience depression, anxiety disorders, and somatization[35]. Upon hearing that the husband had married again, the focus groups thought senior wives should only have their children's future in mind, despite the disapproval of their polygamous state. Senior wives in polygamous marriages in the Bedouin-Arab society in the Negev, Israel suffered more than monogamous wives from low SE, loneliness, and other emotional problems[36]. A study conducted in rural Cameroon[37] revealed that junior wives are more satisfied with their marriage than senior wives. Chaleby[38] points out that in the psychiatric service in Kuwait there are more senior than junior wives under psychiatric treatment. Another study by Chaleby[14] revealed that senior wives relate their psychiatric symptoms to their husbands' subsequent marriages. One major way that Arab women convey psychological distress is somatization. Previous research confirmed that senior wives in polygamous marriages may exhibit body aches, headaches, insomnia, fatigue, and nervousness[3,39]. When an Arab woman expresses somatic and psychological complaints, the practice of polygamy may be a causal factor. Likewise, somatization is evidence that there may be a variety of underlying psychological problems. The particular means through which somatization is conveyed vary across and within community and culture; the decoding process therefore is vital[3]. It is essential for practitioners to be able to recognize and interpret these symptoms, particularly in relation to the potential underlying possibility of polygamous family structure as an implicating factor.

Gender constructions of women as self-sacrificing wives and mothers who do not complain may in turn exacerbate the likelihood of the sorts of symptomatology revealed in this study. Women are frequently not consulted when a man opts to assume a junior wife; the powerlessness of that lack of choice and the possibility of fewer familial social and economic resources can cause distress[28,32]. In Egypt, Philips[40] found that while permission is required from the first wife, few women actually give the husbands their consent to marry a second wife. In Kuwait, many men marry again without consulting or telling their wives, and roughly half of the participants from a recent survey did not agree to tell their wives about their re-marrying[41]. In Islam, it is important that the husband tell his first wife whenever he plans to marry again[42].

From the Islamic perspective there are several rules that must be followed by men who choose to practice polygamy. The Koran says "Marry women of your choice two, or three, or four; but if you fear that you shall not be able to treat justly with them, then only one. That will be more suitable to prevent you from evil" (Koran, 4:3). If a man cannot treat each of his wives equally, then he should only take one wife. Another verse says "You will never be able to deal justly between wives however much you desire (to do so). But (if you have more than one wife) do not turn altogether away (from one) leaving her in suspense" (Koran, 4:129).

This may be the result of men acting without reference to the teachings of Islam - and in particular, the imperative to treat all wives equally, and to assume a second wife only if economically feasible[43]. Abdu Salaam[41] pointed out that 71% of Kuwaiti women respondents reported that men could not do justice or be fair between their wives. The same study showed that 50% of the men agreed that they cannot do justice between the wives.

The present research points out some concerns in relation to the degree of agreement with the practice of polygamy. The majority from both groups of women does not agree with polygamy. Only a small percent agree with the practice of polygamy under some circumstances, or agree. One important difference was that about 4.6% of the polygamous participants agree with the practice of polygamy, compared to 0% of their counterparts. Those women who practice it may seek to legitimate polygamy as a way of coping with the associated problems in their lives. Moreover, the notion of self-sacrifice has a cultural and political dynamic in the Arab culture, and the need to maintain a relationship for the sake of the children is a significant motivator for many women.

In conclusion, practitioners and policy makers need to be aware of the psychological, familial and economic effects of polygamy on women and their children. As the results point out higher marital distress in a polygamous family may in turn exacerbate the negative role modeling and impede children's growth and achievements. It should be noted that this manuscript serves as a voice for women in polygamous marriages and raises the question of mental health of people where polygamy is practiced. Further research is required to compare women in polygamous marriages based on their order (first, second and third, *etc.*). One of the limitations of this study is the small sample in particular when comparing first, second and third wives in polygamous marriages.

COMMENTS

Background

According to the Ethnographic Atlas Codebook, of the 1231 societies that were studied, 453 had occasional polygamy, 588 had more frequent polygyny. Specifically, polygamous communities exist in Algeria, Benin, Chad, Congo, Ghana, Togo, Tanzania, Thailand, Saudi Arabia, the United Arab Emirates, Egypt, Kuwait, and Jordan, among fringe Mormon communities in the United States of America, and indigenous groups in Canada.

Research frontiers

Studies conducted in different countries have shown that polygamy can lead to co-wife jealousy, competition, and unequal distribution of household and emotional resources, and generate acrimony between co-wives and between the children of the different wives. Another finding is that women in polygamous marriages report low self-esteem (SE) and less life satisfaction than women in monogamous marriages.

Innovations and breakthroughs

The present study is the first to examine the psychological, SE, family function, marital satisfaction, life satisfaction and degree of agreement with the practice of polygamy among polygamous women with a control group from monogamous women in Syria.

Applications

Practitioners and policy makers need to be aware of the psychological, familial

and economic effects of polygamy on women and their children. Further research is required to compare women in polygamous marriages based on their order (first, second and third, *etc.*). One of the limitations of this study is the small sample in particular when comparing first, second and third wives in polygamous marriages.

Peer review

This is a very well written paper that explores the impact of polygamy on several mental health parameters. The introduction section is clear and the methodology is adequately described.

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3 **Tian D**, Araki H, Stahl E, Bergelson J, Kreitman M. Signature of balancing selection in Arabidopsis. *Proc Natl Acad Sci USA* 2006; In press

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No author given

6 21st century heart solution may have a sting in the tail. *BMJ* 2002; **325**: 184 [PMID: 12142303 DOI:10.1136/bmj.325.7357.184]

Volume with supplement

7 **Geraud G**, Spierings EL, Keywood C. Tolerability and safety of frovatriptan with short- and long-term use for treatment of migraine and in comparison with sumatriptan. *Headache* 2002; **42** Suppl 2: S93-99 [PMID: 12028325 DOI:10.1046/j.1526-4610.42.s2.7.x]

Issue with no volume

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9 Outreach: Bringing HIV-positive individuals into care. *HRSA Careaction* 2002; 1-6 [PMID: 12154804]

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10 **Sherlock S**, Dooley J. Diseases of the liver and billiary system. 9th ed. Oxford: Blackwell Sci Pub, 1993: 258-296

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Conference paper

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Electronic journal (list all authors)

15 Morse SS. Factors in the emergence of infectious diseases.

Emerg Infect Dis serial online, 1995-01-03, cited 1996-06-05; 1(1): 24 screens. Available from: URL: http://www.cdc.gov/ncidod/eid/index.htm

Patent (list all authors)

16 **Pagedas AC**, inventor; Ancel Surgical R&D Inc., assignee. Flexible endoscopic grasping and cutting device and positioning tool assembly. United States patent US 20020103498. 2002 Aug 1

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