



Kuwaiti Women's Cultural Beliefs about Antenatal Physical Activity Behavior

Dr. Maha Mashary

College of Social Sciences - Department of Social Service - Kuwait University

Access this article online

Quick Response Code:



Website: www.uqu.edu.sa/jss

E-mail: jss@uqu.edu.sa

Table of Contents - Current issue:

<https://uq.sa/whelCr>

Umm Al-Qura University of Social Sciences Vol.11 Issue No.2 April 2019

*Under Legal Deposit No. **Print- ISSN:** 1658-4619 / **Online- ISSN:** 1658-8185*

Kuwaiti Women's Cultural Beliefs about Antenatal Physical Activity Behavior

Dr. Maha Mashary

Abstract

The antenatal period is considered a vital life stage for both the mother and the fetus in terms of well-being and health outcomes. Physical activity and regular exercise during this period are recommended under medical supervision. This is a descriptive cross-sectional study that intends to examine common cultural beliefs about daily lifestyle habits during the antenatal period among Kuwaiti women who have previously conceived from a medical anthropology perspective. A structured questionnaire containing two sections (socio-demographic data, lifestyle behaviors, and a physical activity practice scale) with a total of 38 items was distributed via nonrandom opportunistic sampling to 619 Kuwaiti women. SPSS (version 25.0) was used for the data analysis. The data showed a statistically significant relationship between participants' age, religious affiliation, ethnic background, and cultural beliefs about daily lifestyle habits and physical activity practice during the antenatal period ($P < 0.05$). Respondents' socio-demographic characteristics should be taken into account when planning for effective maternal exercise interventions during pregnancy that seek to turn traditional

beliefs about daily life activities during the antenatal period into healthy lifestyle activity patterns.

Keywords: Beliefs, Antenatal period, Physical activity, Kuwaiti women, Medical anthropology.

المعتقدات الثقافية للمرأة الكويتية حول السلوك المرتبط بالنشاط البدني لمرحلة ما قبل الولادة

د. مها مشاري

الملخص:

تعتبر فترة ما قبل الولادة مرحلة حيوية لكل من الأم والجنين من حيث الحالة الصحية والنتائج الصحية لكليهما، حيث تُنصَح خلال هذه الفترة، وتحت إشراف طبي المرأة الحامل بممارسة النشاط البدني، والانتظام بالتمارين الرياضية. الدراسة الحالية عبارة عن دراسة مقطعية ووصفية تهدف إلى قياس المعتقدات الثقافية الشائعة حول فترة ما قبل الولادة بين النساء الكويتيات، اللاتي سبق لهن الحمل من خلال استخدام منظور الأنتروبولوجيا الطبية. أداة الدراسة الرئيسية هي الاستبانة المكونة من عنصرين: (البيانات الاجتماعية والديموغرافية ومقياس السلوكيات المرتبطة بنمط الحياة، وممارسة النشاط البدني) المتكونين من ٣٨ بنداً، تم توزيعها من خلال استخدام العينة المتاحة العمدية على ٦١٩ امرأة كويتية. وتم استخدام برنامج SPSS (النسخة ٢٥,٠) لتحليل البيانات؛ حيث أظهرت البيانات وجود علاقة ذات دلالة إحصائية بين عمر المشاركين، والانتماء الديني، والخلفية العرقية، والمعتقدات الثقافية حول العادات المرتبطة بنمط الحياة اليومية، وممارسة النشاط البدني خلال فترة ما قبل الولادة ($P < 0.05$). توصلت الدراسة إلى ضرورة الأخذ في الاعتبار بالخصائص الاجتماعية والديموغرافية للمستجيبين عند التخطيط مسبقاً للتدخلات الفاعلة حول التشجيع للقيام بممارسة التمارين الرياضية أثناء فترة الحمل؛ حيث تهدف تلك التدخلات إلى تحويل المعتقدات التقليدية حول أنشطة الحياة اليومية خلال فترة ما قبل الولادة إلى أنماط للأنشطة، وممارسات يومية صحية.

الكلمات المفتاحية: المعتقدات، فترة ما قبل الولادة، النشاط البدني، المرأة الكويتية،

الأنثروبولوجيا الطبية.

Study Background:

The antenatal period is known as a critical stage for both the mother's and the offspring's health and well-being. Many ailments (genetic disease, unhealthy dietary habits, inappropriate physical activity moves, etc.) can affect this life stage and help prolong mental and health deterioration for the mother, the offspring, or both (Borodulin et al., 2008; Gaston & Cramp, 2011; Padmanabhan et al., 2015). Because of this critical stage, many researchers have conducted qualitative and quantitative studies aiming to investigate the influence of lifestyle behaviors and traditional social norms on maternal health during the antenatal period (Symons & Hausenblas, 2004; Duncombe et al., 2009; Hoang et al., 2009). The findings of the previous research reveal cross-cultural diversity in the practices and beliefs of maternal dietary habits and daily lifestyle behaviors related to the antenatal period.

Several studies have discussed misleading information about the benefits and health risks of exercise on maternal well-being during pregnancy. For example, a study among 300 Saudi Arabian women revealed a significant relationship between the respondent's level of education and the number of inaccurate beliefs on health related practice during the antenatal and postpartum period to ensure the mothers' health during this crucial period (Al-Ateeq et al., 2013). These traditional practices include "antibiotics intake during pregnancy are harmful,... reduction of movement and walking during

pregnancy,...sexual intercourse during pregnancy may cause abortion, {and} the relationship between mother position and the wrap of the umbilical cord” (Al-Ateeq et al.,2013). The findings illustrate that educated respondent's women and women with more children had more misconceptions and beliefs about health related practice during the antenatal and postpartum period. A descriptive study among 120 post-partum Saudi women demonstrated that there are significant associations between respondents' age, parity, and educational level and their traditional postpartum beliefs and practices. The study's finding reveals that more than half (67.5%) of the women reported that they rested on the bed and minimized their movements during the postpartum period due to the following causes: “feeling pain sensation with movement,...fear of uterine prolapse,...leading to pendulous abdomen, {and} feeling of weakness”(Lamadah, 2013). A study in China that has been reported by the majority of Chinese women demonstrated that the main mobility restrictions during the antenatal period which are possibly causing spontaneous miscarriage based on Chinese traditional beliefs include “walking too often” and “walking too fast” (Lee et al.,2009).

A study among Caucasian American pregnant women in their second trimester to examine their behavior and intention to exercise during pregnancy, demonstrated the influence of cultural factors on women's beliefs, willingness, and participation in physical activity during pregnancy (Symons Downs

& Hausenblas, 2004). The findings of the study illustrated that the main barriers to performing physical activity during the antenatal period that was reported by pregnant women were tiredness, feeling uncomfortable, and a lack of time. A qualitative interview study among fourteen overweight and obese pregnant women in the United Kingdom conducted to examine barriers that affect women's intentions of being physically active during pregnancy. The study findings illustrated that there are many internal and external barriers that influence women's engagement in physical activity such as health status (nausea, weakness, and feeling unpleasant due to their look), which was the main internal barriers that prevent women to engage in regular exercise during pregnancy. This was followed by a lack of interest, and insecurity. The most common external barrier to engage in physical activity was their occupational status and being employees while they were pregnant. Working pregnant women reported that they can't engage in regular physical activity because they don't have sufficient time and energy for exercise classes. Moreover, pregnant women reported that the following were external barriers for exercise such as feeling guilty because they don't spend enough time with their family, difficulty to find a convenient childcare, and difficulty to find suitable exercise classes for pregnant women. Also, financial limitations, neighborhood safety, and weather conditions were reported by pregnant women as barriers to physical activity (Weir et al., 2010).

Another study among 294 Zambian women attending the antenatal clinic in Lusaka, Zambia aimed to detect women's health beliefs about pregnancy and childbirth (M'soka et al., 2015). The study findings demonstrated that women held cultural beliefs towards certain food, lifestyle behavior, and the practice of using herbs as a mean to accelerate the delivery process. Moreover, the findings of the study revealed that (1.7%) of the women believed that pregnant women should avoid quarrels and standing in the doorway. This is because this practice will contribute to complications and obstruction during their labor. In addition, women believed that newly-delivered mothers should prevent copulation (8.5%), and the invitation of neighbors to sit with them around the fire (3.7%), because these practices are believed to cause health retardation among postnatal women.

A qualitative study among 45 South Asian mothers was performed to assess the multiple impacts of cultural and behavioral beliefs and practices on the fetus and mothers' health and wellbeing (Greenhalgh et al., 2015). The study results showed that several women believed that physical exercise during pregnancy will contribute to a negative impact on the fetus's condition and cause damage. Also, physical activity during pregnancy will drain the mother's strength and consume her energy and make her feel fatigued always which hinders her to do daily chores and family responsibilities. Moreover, the study findings illustrated the significant impact of women's culture and beliefs on their behaviors during pregnancy. Also,

how they considered their relatives and peers as their main source of information about the antenatal period followed by health care center advice from clinicians. A preformed study to evaluate pregnant women's nutritional habit, lifestyle behavior, and metabolic status in Western China shows that Chinese women often adapted sedentary lifestyles and became physically inactive once they became pregnant (Rong et al., 2015). Due to their cultural beliefs, many pregnant women stop doing their daily regular housework such as sweeping, cleaning and moving furniture because they believed these physical activities might cause miscarriage or premature birth.

A qualitative interview study among 30 pregnant African American and White women between 20–30 weeks gestation in South Carolina, USA, was conducted to explain cultural differences in perceptions of physical activity, weight gain, and dietary behaviors during pregnancy (Whitaker et al., 2016). The study findings revealed cultural differences between pregnant women in their perception, intentions and beliefs about engaging in physical activity during the antenatal period. Few women reported that they had no intentions to engage in physical activity during pregnancy, and half of the women reported their intention to exercise during pregnancy, but due to lack of timing they couldn't achieve their planning guidelines. Three-fourth of the women believed that regular physical activity during the antenatal period has a beneficial outcome on both mother and fetus health conditions such as facilitate delivery

and make the labor easier without complication. Few women believed that exercise during pregnancy might cause detrimental side effects such as increasing the probability of injury, and preterm labor. Moreover, the findings presented the main cause that prevented pregnant women from performing exercise regularly during pregnancy which is the following: experiencing health problems, unpleasant weather, insufficient time, lack of motivation, shortage access to facilities, and absence of social support.

The Kuwaiti society, as a paternal society, values a big number of family members (having many children), because many children in Kuwaiti culture represent prestige, power, authority, and blessing. Thus, the antenatal period is considered one of the most significant periods in the Kuwaiti family's lifetime, and many daily lifestyle recommendations and restrictions are associated with this stage, such as food restrictions, certain physical movements, and restraint from daily activity and social events (Aoodah,1988). Based on the Kuwaiti public authority for civil information report, the Kuwaitis growth rate is 0.0265, the crude birth rate for every one thousands person is 24, and the average of members in Kuwaiti families is 7 (The Public Authority for Civil Information, 2017). Few studies have been performed about the antenatal period among Kuwaiti women (Aoodah,1988; Ahmed & Al-Sumaie, 2011; AlSeaidan et al., 2016; Al-Yaseen et al.,2013); these studies aimed to detect the most important health risk factors

during pregnancy that might lead to negative effects on both the mother's and the fetus's health condition, such as lack of iron, anemia, obesity, unhealthy food consumption, and sedentary lifestyle.

Life Course Theory:

Pregnancy is a critical window during which fetuses and newborns are rapidly growing and are vulnerable to multiple internal and external toxins factors that impacted drastically their mental and biological health condition and wellbeing. During this period, mothers' dietary behavior and lifestyle practices that are shaped by cultural and community perceptions and traditions influence their emotional, physiological, and social wellbeing outcomes during the antenatal period. According to the life course perspective, the antenatal period is considered as an intermediate transition that provides women the opportunity to improve their former lifestyle habits by adapting healthier and better ones which can contribute to better health and wellbeing of both mother and baby (Herman et al., 2014). And due to cultural beliefs and restrictions on maternal mobility and physical activity during the antenatal period, pregnant women might not meet the National guidance recommendation of daily activity throughout pregnancy. Failing to meet the daily requirement of burning additional energy calories will lead to gain excessive body weight which can cause the development of chronic disease during this crucial period and complications during childbirth due to fetus boy size. This,

in turn, will correspondingly cause an infant's developmental retardation and is life-threatening for mothers and newborn babies if they encounter obstruction during and hemorrhage during labor (Nejimu, 2015).

The Significance and Objective of the Study:

The objective of the current study is to highlight Kuwaitis women's cultural beliefs about practices related to the antenatal period since this period is crucial for both the mother and the fetus's lives and health wellbeing. From a medical anthropology perspective, the present study's objective is to assess the relationship between Kuwaiti women's sociocultural characteristics and traditional beliefs about physical activities and daily lifestyle behaviors during the antenatal period. Improving women's knowledge of optimal daily physical activity levels during the antenatal period will contribute to positive maternal and offspring health outcomes. The current study objective is to expand women's knowledge and information about this period and make them more aware of the beneficial and harmful beliefs during this period by encouraging the health practitioner to use scientific knowledge as a mean of elimination of the harmful beliefs during the follow-up of health checkup in the obstetrics and gynecology clinic.

Definitions of the Study's Terms:

Physical activity is defined as "any bodily movement produced by skeletal muscles which results in energy expendi-

ture. The energy expenditure can be measured in kilocalories. Physical activity in daily life can be categorized into occupational, sports, conditioning, household, or other activities” (CASPERSEN et al.,1985:126).

The Antenatal period is a term that applied for gestation period, starting from the first day of conceiving to child birth. Alternative terms are ‘prenatal’, or ‘antepartum’ (Collins dictionary).

Culture is defined as ideas, customs, and social behavior of a particular people or society (oxford dictionary).

Beliefs is an acceptance that something exists or is true, especially one without a proof (oxford dictionary).

The Methodology of the Study

Study design and population:

This is a descriptive, pioneer cross-sectional medical anthropology study conducted among 619 married Kuwaiti women who were previously pregnant, had experienced birth, and 20 years old and above. A sample survey is the method used in the current study. The sampling method is nonprobability convenience sampling in which the participants were asked to answer a self-administrated questionnaire which was selected from six Kuwaiti government’s sector. The participants were asked to assess their eligibility and willingness to participate in the study. Written informed consent was handed to all study

participants after they were completely informed of the study objectives and procedures and of their right to withdraw from the study at any time. The data collection procedures follow the Kuwait University research method rules and regulations.

The present study aims to answer the following question: Is there a significant relationship between Kuwaiti women's sociocultural characteristics and maternal beliefs about lifestyle behaviors during pregnancy?

Study instrument and data collection:

The main study instrument is a structured questionnaire containing two sections with a total of 38 items. The first section consisted of questions on respondents' socio-demographic data (9 items), such as age, educational level, ethnic background, religious affiliation, occupational status, number of children, and monthly income, as well as on the source of information related to physical activity practices during the antenatal period (e.g., mother, grandmother, social media, media, health centers), the participants could choose more than one answer. The second section had a scale developed by the researcher containing questions related to maternal beliefs regarding lifestyle behaviors and physical activity practices (29 items), such as "Looking at the ugly face will affect the shape of the offspring and can become ugly", "Pregnant women should not sleep on the abdomen because it will cause suffocation to the offspring", "Pregnant women should not wear

yellow clothing because she may cause an offspring to have jaundice after birth”, and “It is best for the pregnant women not to exercise and to minimize movement as much as possible”.

Before the distribution of the questionnaire and to assure content validity of the present study’s instruments, five academic colleagues reviewed the questionnaire. The reliability of the study instrument showed high internal consistency; 0.88 was the Cronbach’s alpha of the lifestyle behaviors scale.

Preliminary study analyses:

Data were analyzed using SPSS for Windows version 25.0.1, and t-test and ANOVA test were employed to examine differences between respondents’ beliefs about lifestyle behaviors during pregnancy and socio-demographic variables. On a five-point Likert scale, items in the lifestyle behaviors scale were measured from 1 (strongly disagree) to 5 (strongly agree), and the highest mean indicated higher beliefs on cultural practice about the antenatal period.

The data collection process took about four months, from April to July 2018. The questionnaire was distributed by five trained research assistants among Kuwaiti women who had given birth. After explaining the objective of the study, the research assistants asked the women to participate voluntarily and assured them that their information and identities would be kept confidential and anonymous.

Results

Sample characteristics:

The mean age of the respondents was 39.38 years. More than half of them (58.3%) were currently working, and 57.0% of the respondents achieved the middle-education level. The majority of the respondents (81.4%) were Sunni Muslims, and more than half (61.4%) of the respondents were urban descendants. According to the respondents' governorate districts, 39.9% of them lived in Al-Asimah, and 20.7% of their monthly incomes ranged between 801–1,100 KD. The respondents' mothers were the main sources of information regarding lifestyle behaviors during the antenatal period as reported by 96.9% of the participants (Table 1).

Respondents' beliefs about lifestyle behaviors during pregnancy and Socio-demographic variables:

Table 2 illustrates that there are statistically significant differences between the respondents' religious affiliation and cultural beliefs in maternal lifestyle behavior during the antenatal period. As shown in Table 2, the belief that "Pregnant women should not sleep on the abdomen because it will cause suffocation to the offspring" was higher among Sunni women ($M = 3.47$, $SD = 1.21$) than among Shiite women ($M = 3.22$, $SD = 1.25$). Meanwhile, the cultural belief "Raising cats as a pet leads to miscarriage" is higher among Shiite women ($M = 3.41$, $SD = 1.08$) than among

Sunni women ($M = 2.95$, $SD = 1.05$).

Moreover, Table 3 reveals that there are statistically significant differences between the respondents' ethnic background and cultural beliefs in maternal lifestyle behavior during the antenatal period. **Table 3** illustrates that following common traditional beliefs were higher among women with urban roots than among those with Bedouin roots. These beliefs include "If the mother's face is round or full, the female offspring" ($M = 3.21$, $SD = 1.12$), "Sexual intercourse during pregnancy causes abortion" ($M = 3.23$, $SD = 1.10$), and "The mother determines the sex of the offspring" ($M = 2.98$, $SD = 1.46$) ($p < 0.05$).

On the other hand, women with Bedouin roots showed higher responses than urban women to the following traditional pregnancy beliefs: "Bleeding of the gums during pregnancy is common in most pregnant women" ($M = 3.22$, $SD = 0.96$), "Pregnant woman can not take antibiotics" ($M = 3.61$, $SD = 1.12$), "The pregnant woman must move away from microwave radiation because it is harm to fetal health" ($M = 3.55$, $SD = 1.11$), and "Pregnant woman supposed to stay away from problems because they affect the health of their offspring" ($M = 3.52$, $SD = 1.21$) ($p < 0.05$) (**Table 3**).

In addition, Table 4 shows that there are statistically significant differences between the respondents' age and cultural beliefs in maternal lifestyle behavior during the antenatal period. Age had a strong impact on women's cultural beliefs to-

ward lifestyle practices during the antenatal period ($p < 0.05$). Beliefs such as “The mother determines the sex of the offspring” ($M = 3.14$, $SD = 1.32$), “Looking at the ugly face will affect the shape of the offspring and can become ugly” ($M = 3.18$, $SD = 1.35$), and “It is best for the pregnant women not to exercise and to minimize movement as much as possible” ($M = 3.25$, $SD = 1.08$) were reported among older respondents more than among younger ones (**Table 4**).

Discussion:

The findings of the current study revealed significant associations between respondents' sociocultural characteristics and the community's cultural beliefs about daily maternal behavior during the antenatal period. These differences in traditional beliefs about lifestyle practices during this period can be because the Kuwaiti population are descendants of three main geographical countries (Kingdom of Saudi Arabia, Iraq, and Iran), with each region having their own cultural beliefs and norms shaping their population attitudes and daily life behaviors (Geçkil et al.,2009). From generation to generation, these cultural perspectives and values about daily life activities, types of food preferences, and behavior restriction during the antenatal and postpartum periods have been passed down over the years and have become common health beliefs among individuals.

The current findings are consistent with those of a qualitative study among 403 Kuwaiti women that revealed cultur-

al differences in attitudes toward exercise, subjective norms, and perceived behavioral control during the antenatal period (Aoodah, 1988). Moreover, the current study's findings detect a significant difference among respondents' age and traditional beliefs about restrictions, attitudes, and intentions toward daily practices during the antenatal period. These findings can be attributed to the influence of Western sources of information regarding women's reproductive health among young Kuwaiti mothers compared to older ones who are more inclined toward traditional and cultural norms. This study's findings are consistent with those that reveal older mothers hold more conservative and traditional beliefs about physical activity and practices during pregnancy than younger mothers (Aoodah, 1988; Geçkil et al.,2009). The findings of the present study are relevant to a conducted study among 300 Saudi women who reported misconception common health beliefs about the antenatal period such as "bleeding gums is normal for all pregnant women,... belly shape is an indicator of fetus gender,... food craving and the birthmark on newborn baby body {and} "heart burn is an indication of fetus hair thickness" (Al-Ateeq et al.,2013). The study demonstrates that older women with a large number of children and higher educational levels hold more inaccurate beliefs about healthy nutritional intake and physical activity behavior during the antenatal period. These findings can be attributed to the lack of knowledge and information among women about this important period for both maternal and fetus life. Also, a higher

dependency on mothers or friends as the main source of information which contributed to the misconception information about this period. Other explanations that might have contributed to the common misleading beliefs about lifestyle behavior during the antenatal period is the association between unpleasant experiences that the pregnant women had before because of performing certain body position or physical activity during this period that led to health complications for the mother or the fetus.

References:

- Ahmed, F., & Al-Sumaie, M.A. (2011). Risk factors associated with anemia and iron deficiency among Kuwaiti pregnant women. *Int J Food Sci Nutr*; 62(6):585-92.
- Al-Ateeq, M., Al-Rusaies, A., Al-Dughaiter, A. (2013). Perception and effects of antenatal education. *Saudi Med J*, 34(12):179-185.
- Al-Rumahi, M. (2013). Gulf is not oil: oil and development. Madark. Kuwait.
- Al-Seaidan, M., Al Wotayan, R., Christophi, C. A. , Al-Makhseed, M., Abu Awad, Yara, F.N., Ahmed, A., & Abraham, S. et al., (2016). Birth Outcomes in a Prospective Pregnancy–Birth Cohort Study of Environmental Risk Factors in Kuwait: The TRACER Study. *Paediatr Perinat Epidemiol*. Jul; 30(4): 408–417
- Al-Yaseen, E. , Al-Najar, A. , Hassan, M., Al-Ostad, G., & Ibrahim, E. (2013) Palpitation in pregnancy: experience in one major hospital in Kuwait. *Med J Islam Repub Iran*. Feb; 27(1): 31–34.
- Aoodah, M .(1988). Collection and classification of customs and traditions for the life cycle-Birth Stage- AlDoha, Popular Heritage Center, Gulf Council Countries (GCC).

- Borodulin, K., Evenson, K.R., Wen, F., Herring, A.H., & Benson, A. (2008). Physical activity patterns during pregnancy. *Med Sci Sports Exerc*, 40(11):1901–1908.
- Duncombe, D., Wertheim, E.H., Skouteris, H., Paxton, S.J., Kelly, L. (2009). Factors related to exercise over the course of pregnancy including women's beliefs about the safety of exercise during pregnancy. *Midwifery*, 25:430–438
- Gaston, A., & Cramp, A. (2011). Exercise during pregnancy: a review of patterns and determinants. *J Sci Med Sport*; 14(4):299–305.
- Geçkil, E., Sahin, T., & Ege, E. (2009). Traditional postpartum practices of women and infants and the factors influencing such practices in South Eastern Turkey. *Midwifery*. Feb; 25(1):62-71.
- Greenhalgh, T., Clinch, M., Afsar, N., Choudhury, Y., Sudra, R., Campbell-Richards, D., Claydon, A., et al., (2015). Socio-cultural influences on the behaviour of South Asian women with diabetes in pregnancy: qualitative study using a multi-level theoretical approach. *BMC Medicine*, 13:120
- Herman, Dena, Taylor, Marion, Adams, Elizabeth, Cunningham-Sabo, Ledlie, Duran, Nelida, and Johnson, Donna. «Life Course Perspectives: Evidence For the Role of Nutrition.» *Matern Child Health J* 18 (2014): 450.
- Hoang, H.T., & Le Q, K. (2009). Having a baby in the new land: a qualitative exploration of the experiences of Asian migrants in rural Tasmania, Australia. *Rural Remote Health*; 9 (1):1084.
- <https://www.collinsdictionary.com/dictionary/english/antenatal> The significance and Objective of the Study
- <https://en.oxforddictionaries.com/definition/belief>.
- Kaewsarn, P., Moyle, W., Creedy, D. (2003). Traditional postpartum practices among Thai women. *J Adv Nurs*, 41:358-366.
- Lamadah, S. (2013). Postpartum Traditional Beliefs and Practices among Women in Makkah Al Mukkaramah, KSA. *Life Sci J*, 10(2):838-847.

- Lee, D.T.S., Ngai, I.S.L., Ng, M.M.T., Lok, I.H., Yip, A.S.K., Chung, T.K.H. (2009). Antenatal taboos among Chinese women in Hong Kong. *Midwifery*, 25:104–113.
- M'soka, N.C., Mabuza, L.H. & Pretorius, D. (2015). Cultural and health beliefs of pregnant women in Zambia regarding pregnancy and child birth, *Curationis* 38(1).
- Nejimu, Biza. «Food Taboos and Misconceptions Among Pregnant Women of Shashemene District, Ethiopia, 2012.» *Science Journal of Public Health* 3.3 (2015): 410-416.
- Padmanabhan, U., Summerbell, C.D., & Heslehurst, N. (2015). A qualitative study exploring pregnant women's weight-related attitudes and beliefs in UK: the BLOOM study. *BMC Pregnancy Childbirth*. Apr 22, 15:99.
- Rong K, Yu K, Han X, et al. (2015). Pre-pregnancy BMI, gestational weight gain and postpartum weight retention: a meta-analysis of observational studies. *Public Health Nutr*; 18:2172–82.
- Symons, D., & Hausenblas, H. (2004). Women's exercise beliefs and behaviors during their pregnancy and postpartum. *J Midwifery Women's Health*; 49(2):138–44.
- Weir, Z., Bush, J., Robson, S.C., McParlin, C., Rankin, J. & Bell, R.(2010). Physical activity in pregnancy: a qualitative study of the beliefs of overweight and obese pregnant women. *Pregnancy and Childbirth*, 10:18.
- Whitaker, K.M., Wilcox, S., Liu, J. , Blair, S., & Pate, R. R.(2016). African American and White Women's Perceptions of Weight Gain, Physical Activity, and Nutrition During Pregnancy, *Midwifery*. March 34: 211–220.
- The Public Authority for Civil Information, 2017. <https://www.paci.gov.kw/stat/Indicator.aspx>.

Table 3. Descriptive Statistics and T-Test Results for Respondents' Ethnic Background and Cultural Beliefs about Lifestyle Behaviors During Pregnancy.

Characteristics	N (%)	Characteristics	N (%)
Age category, Years		Roots	
20-29	132 (21.3)	Urban	380 (61.4)
30-39	231 (37.3)	Bedouin	206 (33.3)
40-49	113 (18.3)	Kuwait governorates	
50-59	91 (14.7)	Al Asimah	210 (33.9)
>60	45 (7.3)	Hawalli	131 (21.2)
Occupational status		Mubarak Al-kabeer	64 (10.3)
Student	53 (8.6)	AL Farwaniyah	63 (10.2)
Student & employed	26 (4.2)	Al Jahra	75 (12.1)
Employed	361 (58.3)	Al Ahmadi	64 (10.3)
Retired	85 (13.7)		
Housewife	75 (12.1)	Educational level	
Religious affiliation		Low education	190 (30.7)
Sunni	504 (81.4)	Middle education	353 (57.0)
Shiite	110 (17.8)	High education	72 (11.6)
Monthly income (in KD)		Source of information (physical activity pregnancy)	
<500	20 (3.2)	Media	72 (16.8)
501-800	59 (9.5)	Social media	138 (32.2)
801-1,100	128 (20.7)	Grandmother	187 (43.6)
1,101-1,400	120 (19.4)	Mother	25 (5.8)
1,401-1,700	55 (8.9)	Sisters	5 (1.2)
1,701-2,000	49 (7.9)	Friends	177 (41.3)
2001-2,300	46 (7.4)	Health center	181 (42.2)
2,301-2,600	88 (14.2)	Educational institutions	59 (13.8)
2,601-2,900	15 (2.4)	Others	9 (2.1)

Table 2. Descriptive Statistics and T-Test Results for Respondents' Religious Affiliation and Cultural Beliefs about Lifestyle Behaviors During Pregnancy.

Cultural Beliefs	Sociocultural characteristics variables			
	Sec			
	Sunni/Shiite			
	df	t	M	SD
Raising cats as a pet leads to miscarriage.	606	-4.068**	2.95	1.05
			3.41	1.08
Pregnant women should not sleep on the abdomen because it will cause suffocation to their offspring.	609	1.918*	3.47	1.21
			3.22	1.25

* $P < 0.05$, ** $P < 0.0001$ (2-tailed)

Table 3. Descriptive Statistics and T-Test Results for Respondents' Ethnic Background and Cultural Beliefs about Lifestyle Behaviors During Pregnancy.

Cultural Beliefs	Sociocultural characteristics variables			
	Roots			
	Urban/Bedouin			
	df	t	M	SD
If the mother's face is round or full, the female offspring.	581	2.484*	3.21	1.12
			2.96	1.17
Sexual intercourse during pregnancy causes abortion.	577	2.764**	3.23	1.10
			2.98	1.00
The mother determines the sex of the offspring	579	4.130***	2.98	1.46
			2.48	1.30
It is best for the pregnant women not to exercise and to minimize movement as much as possible.	580	2.181*	3.14	1.26
			2.91	1.16
Looking at the ugly face will affect the shape of the offspring and can become ugly too.	579	2.766**	3.09	1.31
			2.78	1.19
The pregnant woman should avoid swimming to stay away from the water waves that hit her stomach.	575	2.821**	3.39	1.10
			3.12	1.07

Cultural Beliefs	Sociocultural characteristics variables			
	Roots			
	Urban/Bedouin			
	df	t	M	SD
Bleeding of the gums during pregnancy is common in most pregnant women.	578	-1.927*	3.06	0.99
			3.22	0.96
Pregnant woman cannot take antibiotics.	552	-3.832***	3.20	1.26
			3.61	1.12
The pregnant woman must move away from microwave radiation because it is harm to fetal health.	578	-3.641***	3.19	1.21
			3.55	1.11
Pregnant woman supposed to stay away from problems because they affect the health of their offspring.	580	-3.661***	3.12	1.31
			3.52	1.21
Hair dye during pregnancy harms the offspring.	579	-2.755**	3.10	1.14
			3.38	1.18
Going to a funeral while pregnant may lead to miscarriage	578	4.185***	3.22	1.47
			2.71	1.25
Going to a funeral while pregnant may prevent getting pregnant again	573	6.468***	3.19	1.59
			2.32	1.39
Pregnant women should not wear yellow clothing because she may cause an offspring to have jaundice after birth.	578	5.597***	3.18	1.59
			2.44	1.41
Fasting harms the pregnant health even if she is in good health.	581	5.353***	3.12	1.49
			2.44	1.40
The pregnant woman must sit on the chair and pray	579	5.541***	3.17	1.34
			2.53	1.28
Pregnant women should not sleep on the abdomen because it will cause suffocation to their offspring	581	-2.689**	3.30	1.22
			2.59	1.23

Table 4. One-way ANOVA between Respondents' Age and Their Cultural Beliefs about Lifestyle Behaviors During Pregnancy.

Cultural beliefs	Age											
	20-29		30-39		40-49		50-59		60+			
	M	SD	M	SD	M	SD	M	SD	M	SD		
The mother determines the sex of the offspring.	2.40	1.31	3.02	1.45	2.48	1.37	2.87	1.41	3.14	1.32		
Looking at the ugly face will affect the shape of the offspring and can become ugly.	2.71	1.20	3.14	1.26	2.83	1.28	2.88	1.32	3.18	1.35		
It is best for pregnant women not to exercise and to minimize movement as much as possible.	2.75	1.20	3.14	1.26	2.93	1.23	3.12	1.21	3.25	1.08		
Pregnant woman supposed to stay away from problems because they affect the health of their offspring.	3.55	1.16	3.23	1.34	3.35	1.31	3.27	1.23	2.80	1.32		
Hair dye during pregnancy harms the offspring.	3.54	1.14	3.19	1.22	3.12	1.19	3.22	1.02	2.84	1.07		
Going to a funeral while pregnant may lead to miscarriage.	2.54	1.26	3.20	1.43	2.9	1.36	3.09	1.48	3.30	1.39		
Going to a funeral while pregnant may prevent getting pregnant again.	2.26	1.39	3.05	1.58	2.71	1.52	2.87	1.63	3.48	1.53		
Pregnant women should not wear yellow clothing because she may cause an offspring to have jaundice after birth.	2.45	1.41	3.03	1.59	2.73	1.58	2.89	1.57	3.45	1.54		
Fasting harms the pregnant health even if she is in good health.	2.38	1.34	2.95	1.46	2.81	1.51	2.93	1.56	3.40	1.49		
The pregnant woman must sit on the chair and pray.	2.54	1.17	3	1.36	2.79	1.38	3.19	1.43	3.36	1.20		
Pregnancy (nausea and vomiting) is less if the offspring is boy.	2.80	1.11	3.22	1.23	2.88	1.34	3.04	1.22	3.4	1.19		