



TURKISH REPUBLIC OF NORTH CYPRUS

NEAR EAST UNIVERSITY

HEALTH SCIENCES INSTITUTE

**THE QUALITY OF LIFE AND ITS INFLUENCING  
FACTORS OF HEALTHY PREGNANT WOMEN IN NORTH OF  
JORDAN**

GHADEER ALZBOON

DOCTORAL THESIS

DEPARTMENT OF NURSING (BIRTH AND GYNECOLOGY)

SUPERVISOR:

Prof. Dr. GÜLŞEN VURAL

NICOSIA 2020



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## Approval form

The Directorate of the Institute of Health Sciences

This study has been accepted by our jury as a PhD thesis in Nursing Doctoral Program.

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According to the relevant articles of the Near East University post graduate study – education Examinations Regulations, this thesis has been approved and accepted by the above – mentioned members of the jury and the decision of Institute Board of Directors.

**Prof. Dr. Kemal Hüsnü Can BAŞER**  
Director of Graduate Institute of Health Sciences

## **STATEMENT (DECLARATION)**

Hereby I declare that this thesis study is my own study, I had no unethical behavior in all stages from planning of the thesis until writing thereof, I obtained all the information in this thesis in academic and ethical rules, I provided reference to all of the information and comments which could not be obtained by this thesis study and took these references into the reference list and had no behavior of breaching patent rights and copyright infringement during the study and writing of this thesis.

**Ghadeer Ali Alzboon**

**Signature**

## **DEDICATION**

To my beloved mother and father who always pray for me.

To my daughters; Malak and Maryam.

To everyone support me and contribute in any way in my doctoral study.

## ACKNOWLEDGMENT

First and always I thank Allah for giving me the strength and patience to keep going and accomplish my doctoral study. I would like to thank all people who have contributed in any way in this achievement.

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## **ABBREVIATIONS AND SYMBOLS**

**ANOVA:** Analysis of Variance

**JD:** Jordan Dinar

**MSPSS:** Multidimensional Scale of Perceived Social Support

**MOS:** Medical Outcome Study

**QOL:** Quality of Life

**RAND:** Research and Development

**P value:** Level of Significant

**PSS:** Perceived Stress Scale

**WHO:** World Health Organization

## TURKISH SUMMARY

**ÖğrencininAdı:** Ghadeer A. K. Alzboon

**Danışmanı:** Prof. Dr. Gülşen Vural

**AnabilimDalı:** Doğum ve Kadın Hastalıkları Hemşireliği

### ÖZET

**Amaç:** Bu tezinana amacı Ürdün'ün bir ilinde yaşayan yüksek pariteli sağlıklı gebe kadınların yaşam kalitesini etkileyen faktörlerin karma yöntemlerle belirlenmesidir.

**Gereç ve Yöntem:** Tez iki aşamalı bir çalışmadan oluşmaktadır; ilk aşama 218 sağlıklı gebe ilekesitsel olarak gerçekleştirilmiştir. Yaşam kalitesini belirlemek için SF-36 yaşam kalitesi ölçeğinin kısa formu kullanılmıştır. Ardından yüksek pariteli 14 gebe ile tanımlayıcı ve fenomenolojik birçalışma gerçekleştirilmiştir. Her iki çalışmanın örnekleme Ürdün'ün Irbid şehrinden seçilmiştir.

**Bulgular:** İlk çalışmanın sonucu yalnızca parite faktörünün önemli olduğunu ve yaşam kalitesini etkilediğini göstermiştir ( $p<0.05$ ). Çocuk sayısız olan kadınların çocuk sayısı fazla olan kadınlar dan daha yüksek yaşam kalitesi puanına sahip oldukları belirlenmiştir. Kalitatif çalışmanın sonuçları dört anathema ortaya koymuştur: bu gebelikte yeni rahatsızlıkların, yeni rollerin ve sorumlulukların, başetme mekanizmalarının, ve doğum öncesi bakım arama davranışlarının olduğu saptanmıştır.

**Sonuçlar:** İki yöntem kullanmak çocuk sayısı fazla olan kadınların yaşam kalitesinin neden düşük olduğunu anlamamız açısından yardımcı olmuştur. Bu faktörlerin gebelikte yaşam kalitesi ne etkisini ayırt etmek için daha çok nicel çalışmaya ihtiyaç olduğu söylene bilir.

**Anahtar Sözcükler:** Yaşam kalitesi, parite, Ürdülü kadınlar, gebelik

# **The Quality of Life and Its Influencing Factors of Healthy Pregnant Women in North Jordan**

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**Mentor:** Prof. Dr. Gülşen Vural

**Department:** Department of Nursing (Birth and Gynecology)

## **1. SUMMARY**

**Aim:** The main purpose of this thesis was to identify factors influencing quality of life of healthy pregnant women specifically high parity women in a city of Jordan using sequential mixed method design.

**Material and Method:** This thesis had two steps; the first one was a cross-sectional design of 218 healthy pregnant women. Short form-36 health survey was used to measure quality of life. It was followed by conducting descriptive phenomenological design of 14 high parity pregnant women. Both samples were selected from Irbid city in north Jordan.

**Results:** The result of first study showed that only the parity factor had a significant difference and effect on the quality of life ( $p < 0,05$ ). Low-parity women reported higher quality of life scores than high-parity women. The results of qualitative study were elaborated on four main themes: experienced new discomforts in this pregnancy, experience of new responsibilities or roles, coping issues, and seeking antenatal care.

**Conclusion:** using mixed method approach of research helps to understand why high parity women had poor quality of life during pregnancy. Further nursing quantitative research is required to elaborate these factors impact on the QOL during pregnancy.

**Key Words:** Quality of life, parity, Jordanian women, and pregnancy.

# 1. INTRODUCTION

## 1.1. Problem Statement and Significant

Pregnancy is viewed as a time of joy and a normal event in women's life. Globally, the health of women during pregnancy get more interest in area of health care research, practice, and policy. Two of the United Nation Millennium eight goals 2015 focused on "improve maternal health" and "reduce child mortality" (<https://www.un.org/millenniumgoals>, Accession date: 10 September 2019). In Jordan, the maternal mortality rate in 2018 was 29 per 100 000 ([www.jordantimes.com/news](http://www.jordantimes.com/news), Accession date: 11 December 2019). The perinatal mortality rate (including still birth and neonatal death) was 13 deaths per 1,000 pregnancies of seven or more months' duration, and the total fertility rate was 2,7 children per women (Department of statistics and ICF, 2019).

Women's health and wellbeing could be affected by normal physiologic and emotional changes of pregnancy. Even the pregnancy is healthy and uncomplicated; it may be have negative impact on women's QOL including physical, psychological, and social health (Legadec et al., 2018). For physical health, a majority of women complain of pregnancy related discomforts or symptoms through the gestational stages such as nausea and vomiting (Balíková and Bužgová, 2014). For psychological health, pregnant women may show increased stress level and psychological distress (Pires et al., 2014; Shishehgar et al., 2014). And for social health, women who experienced pregnancy symptoms may be socially and physically inactive in participating, for example, performing physical exercise (Atkinson & Teychenne, 2019).

Thus, such experiences may lead to poor QOL and adverse health outcomes. The adverse effect will be not only on women's health but also on their babies' health. For example, Lau (2013) evaluated the effect of perceived stress and QOL on preterm birth and low birth weight in China. The results in previous study showed



that women with high perceived stress and poor QOL in physical domain were more likely to have low birth weight babies. Furthermore, other studies revealed that women with poor QOL in pregnancy may experience psychological distress such as high perceived stress and antenatal depression (Pires et al., 2014; Shishehgar et al., 2014; Shishehgar et al., 2013; Lau & Yin, 2011).

Recently, all researchers in area of maternal and child health care condenses their efforts not only on the objective indicators, but also they encourage the work on the subjective view point of women before, during, and after pregnancy. One of the most developed concept to assess women perceptions of their health and wellbeing is QOL. The World Health Organization (WHO) defined QOL as “an individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (WHO, 1997). Improving the QOL for all people is a goal set by: Centers for Disease Control and Prevention (CDC) Healthy people 2020 (<https://www.cdc.gov>, Accession date: 11 September 2019), and World Health Organization (WHO, 1997).

There are two goals of Healthy people 2020 directly focused on the QOL: first one is to “attain high quality, longer lives free of preventable disease, disability, injury, and premature death”, and the second one is to “promote quality of life, healthy development, and healthy behaviors across all life stages” (<https://www.healthypeople.gov/>, Accession date: 11 September 2019). In addition, King and Hinds (2011) pointed out that the QOL assessment is consistent with the goal of nursing care. Padilla and Grant (1985) revealed that QOL indicates “that which make life worth living and connotes the caring aspects of nursing, because nursing is concerned not only with survival and decreased morbidity, but with the whole patient”. King and Hinds (2011) asserted that nursing is a caring practice in which nurse promote patient physical, psychological, social, and spiritual health and wellbeing incorporating QOL.

However, the goal in medical care including nursing antenatal care remains directed to increase the likelihood of a favorable maternal and neonatal outcomes (Ramírez-Vélez, 2011). The improvement of quality of care remains followed the medicalized model of care. Less consideration is given toward evaluation of QOL in medical or nursing practice in order to promote maternal health (Calou et al., 2018). Therefore, the evaluation of QOL is important as health outcome in clinical settings. Less consideration is given to evaluate and improve the QOL as health outcome in clinical setting.

Screening the QOL and identifying its related factors is one of nurses and midwives roles through utilizing nursing process and comprehensive care. Nursing science and knowledge emphasize the role of effective nursing care in improving individual's QOL (King, 1994). In a study of Emmanuel et al., (2012), the demographic and social support predictors of QOL were investigated among Australian childbearing women. The researchers highlighted the need for nurses and midwives to consider social support as strong predictor of maternal health and QOL. This may contribute in designing early nursing intervention and provision of needed social support, and ultimately enhancing women's QOL in pregnancy.

Thus, in a study of Dağlar et al., (2019), nurses and midwives need to be conscious, educated, and recognized the factors that adversely affect the QOL of pregnant women at early stage; to prevent inequalities in QOL and maternal health outcomes. Therefore, recently, many nursing and health care researchers evaluated QOL during pregnancy and investigated its related factors. For example, Legadec et al., (2018) conducted a systematic review to identify these factors. It was found that the main factors associated with high QOL in pregnancy were the mean maternal age, a high educational level, high income, being primiparous, being in the first trimester of pregnancy, having positive feelings toward pregnancy, high social support from family and friends, low stress and anxiety, and doing physical exercise. Most of the reviewed studies were conducted among high risk pregnant women and

did not include all stages of pregnancy. Nineteen studies used the 36-Item Short-Form Health Survey (SF-36).

Moreover, Kazemi et al., (2016) conducted a systematic review about the assessment scale and associated factors of QOL in pregnancy in Iran. The main factors that were related positively to QOL were: good social support, high socioeconomic status, and wanted pregnancy. And factors that were correlated negatively with QOL were severe nausea and vomiting, and sleep problems. In Iranian study of Shishehgar et al., (2013), good QOL was associated with a low stress level and good social support among healthy pregnant women in the first and second trimesters. Besides, Wang et al., (2013) reported that pregnant women in late pregnancy had lower QOL scores, and parity was the factor that related to QOL.

In addition, Dunkel Schetter (2011) conducted a review which discussed the role of stress process in pregnancy and its relations to preterm birth and low birth weight baby. They pointed out to the common stressors that influence women's health in pregnancy; financial problems, strain in intimate relationships, family responsibilities, employment conditions, and pregnancy related concerns. These factors may have adverse effect on the QOL of pregnant women.

During pregnancy, the information obtained from QOL assessment during antenatal care or home visits can be integrated in clinical care or during counseling time. It helps the health care providers to determine pregnant women's needs and their required care and treatments. The assessment could detect the inequality in QOL of pregnant women and therefore inform health care professionals and decision makers about the required care and interventions.

Therefore, this thesis plays a crucial role in advancing our knowledge and understanding about factors that affect the QOL of pregnant women. Some of them investigated quantitatively in first step of thesis and the other embedded factors demonstrated in the findings of second step of thesis (qualitative design).

The findings of this thesis allow nurse and midwife to understand high parity women's needs in pregnancy and improve nursing care. They can provide educational and counseling interventions during antenatal care. In addition, the findings inform nurse leaders about the critical issues that concern the QOL during pregnancy taking in consideration parity factor. The new valuable knowledge contributes in developing new researches. Consequently, the QOL and health of high parity women may improve in pregnancy. Furthermore, our findings provide evidence regarding using SF-36 survey among pregnant women population.

However, most of previous evidences employed QOL as an independent variable while perceived stress as dependent variable (Shishehgar et al., 2014; Shishehgar et al., 2013; Lau & Yin, 2011). But Lau and Yin (2011) pointed out that the direction of causality between the two variables was not clear. Perceived stress is a major contributor to unhealthy behavior such as smoking (Silveira et al., 2013), and may cause sleep disturbances (Li et al., 2016). Consequently, health problems may be developed which may lead to adverse physical and mental health outcomes. Thus, in step one of our thesis, the effect of perceived stress on the QOL during pregnancy was investigated.

To date, according to literature search, most of previous studies used only quantitative design to investigate QOL of pregnant and mostly those with pathological condition. The investigated factors were limited. No studies investigated the QOL during pregnancy or determined the influencing factors of the QOL during pregnancy in Jordan. Additionally, no any Jordanian studies employed short form-36 (SF-36) survey in the context of pregnancy. There is lack of knowledge regarding the healthy women's experiences during pregnancy particularly high parity women.

The current thesis was relevant because it was employed sequential mixed method design. Therefore, this thesis includes two steps: firstly, quantitative study was interested on identifying the influencing factors of the QOL among healthy

pregnant women in Jordan using descriptive cross-sectional design. These factors were socio-demographic factors, obstetric factors, perceived stress, and perceived social support. Secondly, qualitative study aimed to understand the experience of pregnancy of high parity women in north Jordan. The results were elaborated under the scope of the QOL and their influencing factors.

## **1.2. Aims**

The evaluation of subjective perceptions of women's health and QOL during pregnancy; is important in providing a considerable ground for improving nursing quality of care, and thus promote maternal health (Calou et al., 2018). Although pregnancy is a natural process, it includes changes in QOL due to the experience of some pregnancy related symptoms and variations in adaptation process. Changes in QOL and adaptation process of pregnant women could affect by many factors such as socio-demographic factors, obstetric factors, perceived stress, and perceived social support.

Therefore the purpose from conducting this thesis was to determine the QOL of healthy pregnant women and its related factors in Irbid City in Jordan using sequential mixed method design. Thesis began with quantitative part followed by qualitative one.

The purposes of first step of thesis (quantitative cross-sectional design) were firstly, to determine the difference in QOL based on the socio-demographic and obstetric characteristics of healthy pregnant women in Irbid city in Jordan. Secondly, to identify the effect of socio-demographic and obstetric factors, perceived stress, and perceived social support on the quality of life (QOL) of healthy pregnant women in north Jordan.

The research questions that were answered in this step ( quantitative part) are:

1. What are the quality of life scores, perceived stress scores, perceived social support scores, and the demographic – obstetric characteristics of Jordanian pregnant women in this study?
2. Is there a difference on the quality of life scores among Jordanian pregnant women based on their demographic- obstetric characteristics?
3. What is the effect of demographic- obstetric factors, perceived stress, and perceived social support on the quality of life scores of Jordanian pregnant women?

The findings of first quantitative part showed that high parity women had low QOL than low parity women. High parity women in that study were those had four children or more. Therefore, the second step aimed to describe and understand the experience of high parity (those who have 4 children or more) in pregnancy in Jordan. Accordingly, the primary research question was: What are the lived experiences of pregnancy (which is considered healthy) in high parity women in Irbid city in Jordan?

The main objectives of second step of thesis were:

- To understand of personal experiences of being pregnant while having four or more children.
- To explore the experience of high parity women in taking care of children and household duties during pregnancy in Irbid city in Jordan.
- To explore women's feelings and thoughts of taking care of children during pregnancy.
- To explore husband roles on taking care of children during pregnancy.
- To get knowledge about the needs of high parity women in pregnancy.

## **2. GENERAL INFORMATION**

In this section, we reviewed the previous studies that were interested on the: pregnancy, QOL, theoretical framework of QOL, factors influencing QOL of healthy pregnant women specifically; socio-demographic and obstetric factors, perceived stress, and perceived social support. In addition, the review discussed the maternal health in Jordan and QOL from nursing perspectives.

### **2.1. Pregnancy**

Pregnancy is a common period in women's life started from the union of sperm with the egg to the birth of fetus (Edelman et al., 2017). Usual and normal pregnancy consists of approximately nine months or 40 gestational weeks. This period categorized as three trimesters. Each of these trimesters has specific physiological and psychological changes during pregnancy. Women adaptation to previous changes may vary according to their perception to stressors and ability to modify her usual routines (Edelman et al., 2017). The previous nursing authors explained that, many women may demonstrate ineffective coping and adaptation to pregnancy changes when it they experience another stressors such as; financial crises, violence behaviors, and lack of social support.

Psychological distress and maladaptive process to pregnancy contributes to have psychosomatic complains and behaviors such as nausea and vomiting in first trimester of pregnancy, sleep problems, and excessive eating (Edelman et al., 2017). However, most pregnant women perceive this complains as normal and try to effectively cope without seeking professional help or health care.

Generally, Women have various physiological and psychological affect as a result of hormonal and hemodynamic changes during pregnancy (Edelman et al., 2017). Consequently, women may experience some pregnancy related symptoms or discomforts (such as; nausea and vomiting, heart burn, and polyuria), which could affect women's health and their QOL. In Australian study of Tan et al., (2018), it was

found that poor QOL was linked to increasing the severity of nausea and vomiting. Furthermore, the study of de Oliveira et al., (2013), demonstrated that the urinary incontinence during pregnancy had a negative effect on women's QOL. In the previous study, the majority of women who had urinary incontinence were multipara. Demircan et al. (2016) documented that pregnant women with urinary incontinence had poor work performance, less likely to perform their daily home activities, and more nervous. In previous study, age and parity were considered as possible predictors of Urinary incontinence during pregnancy.

Regarding the psychological changes during pregnancy, the experience of normal discomforts may be stressful for pregnant women. Women who have nausea and vomiting during pregnancy were more likely to have pregnancy specific stress, anxiety, and depression than those without nausea and vomiting (Faramarziet al., 2015). Also, maternal stress was considered as risk factor for disturbed sleep among Chinese pregnant women (Li et al., 2016). In that, the adaptive changes of pregnancy could change women's perception of stressors and ability to cope effectively (Edelman et al., 2017). A lot of studies found that high level of stress during pregnancy was found to be a predictor for maternal fatigue (Yehia et al., 2019), antenatal depression (Abujilban et al., 2014), hypertensive disorder, preterm birth, and low birth weight babies (Cardwell, 2013). In addition, the findings of Shishehgar et al., (2014) and Shishehgar et al., (2013) showed that there was a negative relationship between high perceived stress and QOL. Poor QOL during pregnancy could cause high level of stress.

## **2.2. QOL Definitions**

QOL received more attention in health care sciences. It is not sufficient to measure the burden of disease, but it is required to assess and know the quality that the patients live (Legadec et al., 2018; who, 1997). QOL may act as indicator to population's mortality and morbidity (Wang et al., 2013). Moreover, QOL may be



considered as outcome of professional nursing care and as an indicator of quality care (King & Hinds, 2011).

Variant definitions of QOL were documented in literature due to its usage in different contexts. It has been used in various disciplines such as political fields, educational settings, and environmental studies and also in area of health care (King & Hinds, 2011). The QOL at Aristotle's time included attainment of happiness, the good life or the outcome of life of virtue (Morgan, 1992). Others define QOL to include life satisfaction. For instance, Wilson and Cleary (1995) defined QOL as subjective well-being related to how happy or satisfied someone is with life as a whole. While Gurková (2011) defined the QOL in nursing as; subjective perception and evaluation of individual living conditions based on the individual's internal standard. The World Health Organization (WHO) defined QOL as "an individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (WHO, 1997).

However, despite the variability in the definition of QOL, there are consensus about common attributes of QOL. As documented in literatures, first, there is consensus that QOL is highly subjective (WHO, 1997; Kowitt et al., 2018). Each individual has a unique point of view. Second, the QOL is a "dynamic construct". In that, besides that the QOL differ between individuals according to their feelings, experiences and priorities it also differed over times in same individual according to their expectations, some circumstances, and psychological states (Kowitt et al., 2018) such as using coping techniques. And third, despite there is a consensus that QOL is multidimensional concept, but there are a lot of definitions with varied domains and attributes (WHO, 1997; Kowitt et al., 2018).

Costansa et al (2008) introduced two interacted elements of quality of life. The first; subjective well-being: which can be assessed the individual satisfaction, happiness, or well-being by using a research tool (survey, interview, etc). The second

one is the objective elements which assess the social, economical and health indicators to determine the fulfillment of human needs (Reproduction, security, affection, etc). Accordingly, QOL was defined “the extent to which objective human needs are fulfilled in relation to personal or group perceptions of subjective well-being” (Costansa et al., 2008). On conclusion, varied definitions were developed in health care research according to the context in which it was used.

### **2.3. Early Work in QOL**

Historically, the first used of QOL concept is in Aristotle’s time (Mandzuk & McMillan, 2005). In a review of Morin et al., (2017), the concept of QOL firstly used in the United States after world war two and in Atlantic secondarily in the 1970s. Moreover, several scientific journals were originated and mainly focused on QOL like “Quality of life research”, “Health and quality of life outcomes”, “International and Interdisciplinary Journal for Quality of Life Measurement”.

Many conceptual models were developed to explain the relationships within the construct of QOL. In a systematic review of Bakas et al., (2012), the most frequent used QOL models were developed by Wilson and Cleary (1995), Ferrans and colleagues (2005), and the World Health Organization (WHO, 2007). There are a consensus in those models that the QOL subjective and multidimensional concept. Both Wilson and Cleary (1995) and Ferrans et al. (2005) model had same abstract concepts. They include: biological, symptoms, functional status, general health, and quality of life. Ferrans and colleagues (2005) revised Wilson and Cleary (1995) model so, it was complete and better describing the individual and environmental factors. It was also provide clear conceptual and operational definitions of QOL.

Another model was the World Health Organization International Classification of Functioning, Disability, and Health (WHO ICF) which includes abstract concepts of: functioning, disability (body functioning and structures, activities, and participation), and contextual factors (environmental and personal) (Bakas et al., 2012). The world health organization developed a QOL questionnaire named

whoqol-bref. In addition, one model was derived from Medical outcome study MOS in 1980 (King & Hind, 2011). A work continued in that study by developing a short form tool that measure the QOL (Ware & Sherbourne, 1992). Another tool was developed by Padilla and Grant (1985), multidimensional linear analogue scale, which includes domains of psychological well-being, physical well-being, and symptoms control.

#### **2.4. Using of SF-36 in Jordanian Studies**

The SF-36 health survey is a generic questionnaire that was developed by MOS and health insurance experiment or research and development (RAND) (<https://www.rand.org/health-care>, Accession date: 12 June 2018). In one Jordanian study, Khader et al., (2011) tested the psychometric properties of SF-36 survey among general adult population. The domain of physical functioning received the highest mean (69,8), while the bodily pain was lowest mean (54,6) among Jordanian women. The SF-36 is valid and reliable measure of QOL among adult Jordanian population. The coefficient alpha was ranged from 0,71 for vitality and general health to 0,90 for physical functioning domain.

In addition, Alazzam et al., (2011) used SF-36 to test the relationship between vitamin B12 level and QOL among Jordanian university students. It was found that there was no correlation between the previous mentioned variables. The reliability and validity in previous study was examined. In Jordan, to date, no any empirical evidences that employed SF-36 survey in context of pregnancy.

#### **2.5. QOL during Pregnancy**

Many studies evaluated the QOL during pregnancy. The researchers found that women experienced low QOL during pregnancy (Lau 2013; Vachkova et al., 2013; Ramírez-Vélez, 2011). In French study of Morin et al., (2019), the researchers investigated the QOL from first trimester to nine months of pregnancy, and they compared between healthy and complicated pregnancy. Their results showed that the

QOL was decreased between fourth month to eight months of pregnancy in both healthy and complicated pregnancy. The greater decrease in QOL was reported in complicated pregnancy groups.

The causes of poor QOL in pregnancy may consider as adverse outcome to hormonal and anatomical changes in women's body. The consequences of these changes on women's health varied throughout the stages of pregnancy. Nausea and vomiting are more prominent at the first trimester of pregnancy, heartburn at second trimester, while sleep problems and back pain at third trimester of pregnancy. Therefore, it may affect women's general health, physical functioning, social functioning, bodily pain, and their vitality which represents the QOL as described by Ware and Sherbourne (1992), and RAND.

As evidenced by some studies, it was found that poor QOL associated the presence and severity of nausea and vomiting during pregnancy (Tan et al., 2018; Heitmann et al., 2017; Balíková & Bužgová, 2014; Jouybari et al., 2012). In addition, low QOL during pregnancy has adverse maternal and neonatal health outcomes. It is associated with preterm birth, low birth weight babies (Lau, 2013), and psychological distress (Pires et al., 2014; Shishehgar et al., 2014; Shishehgar et al., 2013; Lau & Yin, 2011).

## **2.6. Theoretical Model**

Theoretical or conceptual model widely used to guide nursing research and practice. It represents the main concepts of researchers' area of interest and how it's related to each other. There are four basic concepts in nursing framework: person, health, environment, and nursing.

This dissertation guided by Medical Outcomes study conceptual framework (MOS) (Tarlov, 1989) and King's conceptual model of goal attainments.

### **2.6.1. MOS framework**

The domains of QOL in this study were evaluated according to MOS framework. The MOS was a 2–year observational study which aimed to “(1) determine whether variations in patient outcomes are explained by differences in system of care, clinician specialty, and clinicians' technical and interpersonal styles and (2) develop more practical tools for the routine monitoring of patient outcomes in medical practice. Outcomes included clinical end points; physical, social, and role functioning in everyday living; patients' perceptions of their general health and well-being; and satisfaction with treatment” (Tarlov, 1989). It derived their concepts from the World Health Organization (1948) definition of health “a state of complete physical, mental, and social well-being and not merely absence of disease or infirmity” (WHO, 1997).

The initial works of MOS delineated six domains of health that formulated 20 items health survey. Then it was revised to design MOS short form-36 survey which includes 8 health concepts: physical functioning, role limitations because of physical health problems, bodily pain social functioning; general mental health (psychological distress and psychological well-being), role limitations because of emotional problems, vitality (energy/fatigue), and general health perceptions (Ware & Sherbourne, 1992; <https://www.rand.org/health-care/>, Accession date: 12 June 2018).

### **2.6.2. King's framework of goal attainment**

King (1994) described the core facts of King's goal attainment framework on the following:

*“King's conceptual framework of three dynamic interacting systems (personal, interpersonal, and social) provides a structure for observing the interacting elements that enhance or impinge on the quality of life. Interactions and transactions with nurse lead to goal-setting for individuals, families, and society. Goal-setting usually leads to goal attainment, which produces satisfaction with self and improves one's*

*ability to achieve future success. The goal of King's theory is health for individuals, groups, and society"*

*(King, 1994)*

In this theory the outcome measure is the goal attainment which can be assessed by the evaluation of QOL. The interaction and communication between nurse and pregnant women lead to obtain comprehensive assessment of women's perceptions of QOL during pregnancy. Besides that, nurse performs assessment of personal and environmental factors. Consequently, actions (interventions) considered to be performed by nurse and pregnant woman to enhance woman's health and QOL. In this dissertation, the MOS short form survey was used to measure the QOL of pregnant women, which may be influenced by personal characteristics, conditions, and their perceptions of stress and social support.

## **2.7. Factors Influencing QOL**

### **2.7.1. Socio-demographic factors and QOL**

The socio-demographic factors get global attention as evidence by the United Nations Millennium development eight goals 2015. Four of them were: to "eradicate extreme poverty and hunger", "achieve universal primary education", and to "improve maternal health", and "reduce child mortality" (<https://www.un.org/millenniumgoals>, Accession date: 10 September 2019). In this thesis, socio-demographic factors were investigated its effect on the QOL during pregnancy. These factors were: maternal age, educational level, employment status, and total family monthly income.

According to the Jordanian statistics, 5% of Jordanian women who aged 15-19 had started child bearing. The proportion of adolescent women who begun childbearing decreased with increasing educational level and income (Department of statistics and ICF, 2019). According to Jordanian demographic statistics of 2018, The proportions of women who were illiterate, received basic education, and completed

bachelor degree were 7,2%, 23,9%, and 17,3% respectively. The unemployment rate was 28,5% among Jordanian married women ([www.dos.gov.jo/](http://www.dos.gov.jo/), Accession date: 10 June 2019).

Socio-demographic status plays a key determinant of women's health and wellbeing during pregnancy. Women with low socio-economic status during pregnancy were more risk to malnutrition, anemia, and low birth weight babies (Aftab et al., 2012). This may related to less antenatal care as evidenced by Okonofua et al., (2017).

In Jordanian evidences, it was reported that low educational level was a predictor for antenatal depression (Abuidhail & Abujilban, 2014; Abujilban et al., 2014). Furthermore, the satisfaction with life was low in Jordanian pregnant women with advanced maternal age, low educational level, and low income level (Abujilban et al., 2017). In a Jordanian study of Athamneh et al., (2013) women of age above 40 were more risk for adverse pregnancy outcomes such as preterm birth, low birth weight delivery, congenital anomalies, and still birth.

According to Lau and Yin, (2011), higher perceived stress scores were reported by women who were in younger age, had lower educational level and working long hours. In same study, it was found that poor QOL of pregnant women was linked to increased perceived stress level. Also, the study of Dağlar et al., (2019) found that the QOL of pregnant women in third trimester was affected by their educational level. It was hypothesized that pregnant women with higher level of education had higher self- confidence. They ask, search, and counsel about baby care. Consequently, they were confident toward their maternal role and well prepared for baby care (Dağlar et al., 2019).

Calou et al., (2018) investigated factors affecting QOL in pregnancy in Brazil. They found that occupation and maternal age were considered as strong predictors of QOL. Occupation may work as a positive predictor of QOL and related to self-esteem. Women who have financial stability and job satisfaction may demonstrate

high self-esteem and good QOL. In previous study (Calou et al., 2018), maternal age was influenced by sleep quality. Aging process and physiologic changes due to advance age may affect pregnant women's adaptation to physiological and psychological changes of pregnancy (Abujilban et al., 2017). Consequently, women may have problems in sleeping which inversely affect QOL in pregnancy.

### **2.7.2. Obstetric factors and QOL**

In this section, the reviewed literature addressed the effects of parity, gestational age, and planned/unplanned pregnancy on the QOL of pregnant women.

Parity means the number of born children. It was widely documented in literature as multiparous versus primiparous or low versus high parity women. In Jordan, the total fertility rate (number of children per women) dropped from 3.5 in 2012 to 2.7 in 2017-2018 (Department of statistics and ICF, 2019).

Many studies reported that high parity considered as risk factor for some adverse maternal outcomes. In Jordanian study of Abuidhail and Abujilban, (2014), high parity women had more likely to have depression than low parity women. Other retrospective study in Saudi Arabia found that the adverse maternal outcomes (such as pulmonary embolism and retained placenta) as an indicator for cesarean section may predicted by high parity factor (Al Rowaily et al., 2014). In Meta-analysis of Kozuki et al., (2013), it was found that women who had three or more children had high risk to preterm, neonatal, and infant mortality. Furthermore, high parity women had less satisfied with life (Abujilban et al., 2017) and lower happiness level (Krause, 2014) than low parity women.

In term of QOL, many studies reported that high parity women had poor quality of life than low parity women. For example, Mousavi et al., (2013) conducted a study to compare the QOL and psychological state between primiparous and multiparous Iranian women in antenatal and postnatal period. The results showed that higher QOL scores were reported among primiparous women than multiparous women.



Other researchers, Calou et al., (2018) investigated the predictors of QOL in pregnancy among Brazilian women. They found that parity was a strong predictor of QOL in pregnancy and it was associated with family relationship. Primiparous women may perceive high level of social support due her feeling and emotions as a first time of motherhood experience. Similarly, a lot of evidences asserted that low parity women had higher QOL scores than high parity women (Legadec, et al., 2018; Mazúchová et al., 2018; Balíková & Bužgová, 2014; Mousavi et al., 2013). This was explained by some evidences: first, it is believed that the physical and psychological health of high parity women deteriorated during pregnancy because they have a huge tasks and responsibilities toward their family in addition to physiologic changes of pregnancy (Nakajima et al., 2013). Second, high parity women performed antenatal checkup less frequently than the low parity women (Alkhaldi, 2016; Tsawe et al., 2015).

**Gestational age** was operationally defined in trimesters: first, second, and third. The first trimester begins with the first day of women's last menstrual period and ends on the last day of week 13. The second trimester starts from 14 weeks and end 27 wk of pregnancy. Third trimester begins at week 28 and extends until the pregnancy is expected to end.

Taşdemir et al., (2010) found that pregnant adolescents have lower quality of life scores than pregnant adults, and the quality of life scores decrease in first trimester and third trimester of pregnancy and increase in the second trimester. As evidenced by Bai et al., (2016), symptoms like nausea, vomiting, and fatigue may contribute to poor QOL in first trimester of pregnancy. In third trimester of pregnancy, women may have fear regarding birth and have some physiologic changes such as normal enlarged uterus, which may lead to poor QOL. Similar findings were reported in other studies in relations to gestational age; poor QOL were found in third trimester of pregnancy while the good QOL was in second trimester (Wang et al., 2013; Vachkova et al., 2013).

**The planning status of pregnancy** was widely investigated in maternal health research. As well documented, the unplanned pregnancy was associated with many adverse health outcomes. Women with unplanned pregnancy had more psychological distress (Barton et al., 2017), worse relationship with partners, and received less social support (Bahk et al., 2015) than planned pregnant women. As evidenced by Khajehpour et al., (2013), unintended pregnancy has been linked to poor QOL, less antenatal care, and risky behaviors. The previous study used SF-36 survey to assess the QOL of Iranian women. In contrast, Gariepy et al., (2017) found that no differences between planned and unplanned pregnancy in term of QOL.

### **2.7.3. Perceived stress and QOL**

Perceived stress is “the feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period” (Phillips, 2013). In this regard, pregnant women appraised their life as unpredictable, uncontrollable, and overloading (Cohen et al., 1983). Pregnant women may have positive or negative perception of stress (Basharpoor et al., 2017). In previous study, pregnant women with positive perception of stress had high level of confidence and use effective coping strategies to deal with stress. In contrast, using ineffective coping techniques in case of having negative perceptions of stress may yield sever psychological distress and adverse health outcomes (Basharpoor et al., 2017).

There are a lot of evidences that pointed out to the impact of perceived stress on maternal and child outcomes. It may risk for hypertensive disorders (Tandu-Umba et al., 2014, Cardwell, 2013), psychological distress (Basharpoor et al., 2017), low birth weight babies (Cardwell, 2013; Rice et al., 2009), preterm birth (Lilliecreutz et al., 2016, Cardwell, 2013; Lau, 2013), and Neuropsychological development disorders of child (Cardwell, 2013; Schuurmans & Kurrasch, 2013).

Moreover, increased stress level by pregnant women considered as a risk factor for maternal fatigue (Yehia et al., 2019), delay or no antenatal care, adopting unhealthy life style behaviors such as smoking and alcohol drinking (Cardwell,

2013). One Jordanian study aimed to determine the predictors of antenatal depression in third trimester of pregnancy. The researchers found that, pregnant women with high level of perceived stress had more risk to antenatal depression (Abujilban et al., 2014). The last mentioned study used perceived stress scale to investigate pregnant women perceptions of stress.

Many studies investigate the relationship between perceived stress and QOL during pregnancy. Shishehgar et al., (2014) and Shishehgar et al., (2013) investigated the impact of QOL on perceived stress during pregnancy among Iranian women. The results showed the significant relationship between QOL and perceived stress. The good QOL had a significant role in decreasing perceived stress among pregnant women. In the previous two studies, QOL and perceived stress were evaluated using the World Health Organization QOL questionnaire (whoqol-bref) and specific – pregnancy stress questionnaire respectively.

In a longitudinal study of Lau (2013), the effects of perceived stress and QOL on preterm birth and low birth weight were investigated in China. Pregnant women with high stress level and low QOL in physical domain were high risk for preterm birth and low birth weight. The relationship between perceived stress and QOL of life was not investigated.

The findings in other Chinese study (Lau & Yin, 2011) revealed that poor QOL were significantly increased the level of perceived stress of pregnant women. In the previous two Chinese studies, The QOL and perceived stress were measured by short form-12 health survey and perceived stress scale (PSS) respectively.

Those previous mentioned studies investigated the effects of QOL on perceived stress during pregnancy. Theoretically and as documented in literature, it was not clear whether the QOL was employed as a cause or effect in relation to perceived stress (Lau & Yin, 2011). Hence, in quantitative part of present thesis, perceived stress was investigated as a causative factor of QOL.

#### **2.7.4. Perceived Social Support and QOL**

Social support has affected the physical and psychological health outcomes of individuals (Cohen & Wills, 1985). It has many forms as were documented in previous studies. It could be in form of tangible support (e.g., financial assistance), informational support (e.g., providing advice and guidance), emotional (e.g., feeling of comfort and care), and social companionship (e.g., participating in recreational activities) (Cohen & Wills, 1985). Perceived social support is focused in individuals' cognitive appraisal of his/ her connections to others (Streeter, & Franklin, 1992).

Social support plays a crucial role in improving the health of women and their babies during pregnancy. It buffers the effect of stressful events and experiences and prevents adverse maternal health outcomes such as psychological distress (Basharpoor et al., 2017, Yim et al., 2015; Pires et al., 2014). In one Iranian study, the correlation between perceived social support and stress during pregnancy was examined. The researchers found that the level of stress in pregnant women with less social support was higher than the others (Iranzad et al., 2014). In Jordanian culture, most pregnant women have been received high level of social support from their husbands, families, and friends (Alyahya et al., 2019). The results in previous study revealed that Jordanian women had moderate to high level of social support during pregnancy.

Most of the reviewed studies asserted the role of social support in predicting QOL during pregnancy. For example, in a cross sectional study in Portugal (Pires et al., 2014), social support may protect pregnant women by improving their QOL, preventing the risk for depressive symptoms, and also enhancing the treatment of these symptoms.

Similar findings were reported the positive effect of social support on the QOL of pregnant women (Gul et al., 2018; Kazemi et al., 2016; Shishehgar et al., 2013; Emmanuel et al., 2012). It was found that social support had a negative relationship

with unpleasant experiences and stress during pregnancy, and the family was the most source of support followed by the friends (Faramarzi & Pasha, 2015).

In the previous studies the QOL was assessed by World Health Organization QOL questionnaire (whoqol-bref) (Shishehgar et al., 2013), short form -12 health survey (Emmanuel et al., 2012), SF-36 survey (Gul et al., 2018), the European health interview surveys (EUROHIS-QOL-8) (Pires et al., 2014). While perceived social support was evaluated by Multidimensional scale of perceived social support (MSPSS) (Gul et al., 2018), maternal social support scale (Emmanuel et al., 2012), the Social Support Appraisals Scale (Shishehgar et al., 2013), semi structured interview developed by researcher (Pires et al., 2014). Therefore, in this thesis, perception of social support was assessed using mixed method design.

## **2.8. Maternal Health in Jordan**

Jordan showed a significant development in health care systems as well as maternal and neonatal health. At the beginning, it is important to provide overview about Jordan demographics and statistics. The estimated total population and life expectancy rate at birth in 2016 was 9,5 million and 73,76 years (<https://www.who.int/countries/jor/en/>, Accession date: 04 October 2019). The literacy rate among adults' females were 97,49 % in 2015 (<https://www.statista.com/statistics/572748/literacy-rate-in-jordan/>, Accession date: 04 October 2019).

The Jordanian literature showed the recent objective and subjective health indicators. In 2015, the maternal mortality rate was 58 per 100 000 (WHO, 2015). This rate decreased to 29 per 100 000 in 2018 ([www.jordantimes.com/news](http://www.jordantimes.com/news), Accession date: 11 December 2019).

According to 5-years Jordanian survey for the 2017-2018, the total fertility rate was 2,7 children per women, 5% of women age 15-19 have begun childbearing. Moreover, the reported perinatal mortality rate (including still births and early

neonatal death) was 13 deaths per 1,000 pregnancies of seven or more months' duration, and the infant mortality rate was 17 deaths per 1,000 live births. The proportion of wanted birth at time of conception of women who age 15-49 was 86%. Only 6% of births were unwanted at all (Department of statistics and ICF, 2019). Furthermore, the participating rates of nurses and midwives in health work force was 40,5 per 10 000 populations (WHO, 2015).

The maternal health services in Jordan has high utilization rate. About 79% of pregnant women have seven or more antenatal care visits. The utilization rate increases with increasing education and household income. The majority of them received the basic antenatal services. For example, almost of 78% of women took iron supplements during their pregnancy. While only 28% of them had protected against neonatal tetanus (Department of statistics and ICF, 2019).

Jordan developed successful national reproductive health strategies and maternal services protocols. Despite the progress in health care system, many challenges were found as reported in WHO (2015) which includes; overlapping health regulations, ineffective performance evaluation in health care setting, weak control of private sectors, lack of good management and planning skills of health care providers. However, it still required to advance the role of nurses and midwives in health care system, developing awareness interventions starting from preconception period.

Some maternal health issues were investigated in Jordanian studies. Okour et al. (2012) found that delay in seeking care was reported by women who had lack of awareness regarding the danger signs in pregnancy, had 37 gestational age or more, and had increased family size. This study conducted in all hospitals (public and private settings)

In a qualitative study in Jordan (Alyahya et al., 2019), women tend to receive their antenatal care in a private setting rather than public setting. In that, the type of care provided in private setting characterized by: advanced equipment, longer consultation time (health care provider give time to women to ask), better

communication skills, the presence of female obstetrician, and easy appointment scheduling. Moreover, women attend the antenatal visits to checkup the baby health and not their health. More attention should be directed for designing educational and awareness interventions.

Moreover, in a recent study, Khader et al. (2018) pointed out to the challenges in nursing and midwifery practice in Jordan. Most maternal healthcare settings did not provide holistic and optimal type of care, did not provide training for their staff, and had shortage in nurses and midwives.

## **2.9. QOL from Nursing Perspectives**

Nursing goals in relation to prenatal health has been directed toward improving maternal and neonatal health outcomes, decreasing mortality rate, and providing good quality of health care. Therefore, the outcome measures of maternal health have been not only centered on the objective indicators but also on the subjective assessment of health. It is not sufficient to get information about: maternal mortality rate, pregnant women weight and their baby weight, But It is essential to obtain knowledge and information about pregnant women's perceptions of their health and QOL.

Varied definitions of QOL exist in literature due to unclear features and aspects of the concept. Plummer and Molzahn (2009) conducted a significant work by applying concept analyses approach to enhance conceptual clarity of QOL from nursing perspectives. The researchers defined the QOL based on the review of five nursing theories (Peplau, Rogers, Leininger, King, and Parse theories) as “an intangible, subjective perception of one's lived experience” (Plummer & Molzahn, 2009). They suggested replacing health with QOL as metaparadigm concept for nursing.

The evaluation of QOL falls under the umbrella of nursing process which considers to be applied in nursing care and practice. The nursing process includes

five steps: assessment, planning, diagnoses, implementation, and evaluation. Utilizing nursing process to evaluate maternal QOL by nurse or midwife; need to look at the human interaction process that leads to goal settings of individuals, families, and societies. The process of goal setting leads to goal attainment which consequently leads to good QOL according to the theory of King (1994). Nurse and midwife can carry out a holistic assessment to determine pregnant women's needs whatever the reason for seeking care in health care settings.

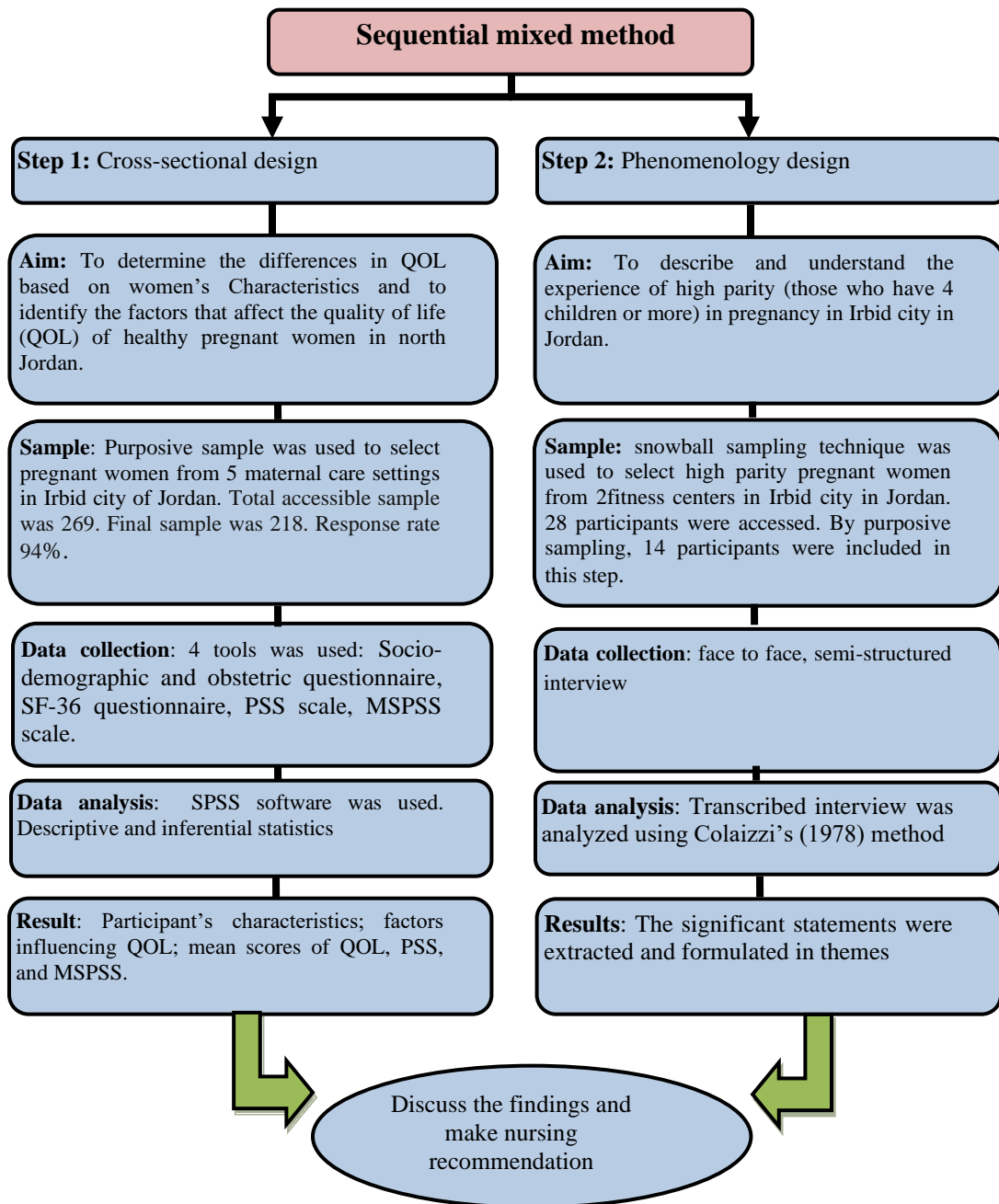
Performing QOL assessment of pregnant women in clinical practice has many challenges or barriers such as: work overload, shortage of nursing staff, inadequate time to get women's points of view, and unsupported hospital policies and protocols (Alyahya et al., 2019; WHO, 2015). For this reason, most of antenatal care focused on objective observations and assessments (such as blood pressure monitoring, fetal heart observation, and laboratory tests) by nurse, midwife, and obstetrician (Khader et al., 2018).

QOL has been widely used in nursing research as outcome measure. Many nursing researcher worked in QOL during pregnancy. For example, Calou et al., (2018), as nurse researchers, investigated factors affecting QOL in pregnancy in Brazil. Calou et al., pointed out indirectly to the role of nurse, by providing individualized and shared assistance for pregnant woman and her relatives during planning and implementing any intervention, in order to improve the QOL of pregnant women. Another nurse researcher was Emmanuel et al., (2012) who examine social support as a predictor for QOL during pregnancy and after child birth. Their recommendations highlighted the need for nurses and midwives to consider social support as a determinant of woman's wellbeing. The nurse should be conscious about the social circumstances of pregnant women during antenatal assessment.



The majority of QOL nursing studies focused on physical, psychological, social, and functional attributes of QOL. Different tools were developed to assess the QOL in different population such as SF-36.

### 3. MATERIAL and METHOD



**Figure 1:** Flow Chart of Sequential Mixed Method

### **3.1. Step1 (Quantitative Part)**

#### **3.1.1. Study design**

In this thesis, a quantitative cross-sectional design and descriptive analytic design was employed by the researcher.

#### **3.1.2. Study setting**

The study was conducted in a Irbid city in north Jordan which has 53 Governmental Maternal and Child health Centers (MCHC) as reported in the statistics of 2018 (<http://www.moh.gov.jo>, Accession date 10 September, 2019) and five governmental hospitals. All these governmental care settings has been directed and accountable by Ministry of Health of Jordan.

The participants were recruited from the outpatient clinic in Princess Badea Teaching Hospital and four maternal health centers. These centers are: Alsareeh, An-Nuayyimah, AL Husn, and Hakama Health Center. The researcher selected these settings because it has high rate of antenatal care for pregnant women and also, easy to access by the researcher. Each of These centers have three to four qualifies nurses and midwives who have bachelor or college diploma degree in Midwifery and bachelor degree in nursing. One of them regulate and provide care during obsterician care (such as preparing women for ultrasound examination). The others carried out antenal, postnatal, and family planning services. While the outpatient clinic of Princess Badea Teaching Hospital have two nurses and three midwives. Each of them either had a bachelor or diploma collage degree in nursing or midwifery.

The health services that provided in these settings contain antenatal care services which involved fetal heart observation, vital sign assessment, laboratory investigations (such as hemoglubin level, fasting blood suger, and urin analysis), tetanus vaccine administation, counseling and health education services on breast feeding and family palnning. The postnatal care services involve: general examination, wound care for cesarean women, administration of medicine,

counseling and health education about family planning and breast feeding. The family planning services includes counseling and administration different type of contraceptives. The intrauterine device could be inserted by midwife or obstetrician.

According to the statistics of ministry of health of Jordan in 2018, the percentage of using the antenatal services, postnatal services, family planning services, and the infant care services in maternal health centers in irbid city were 14,18%, 18,52%, 36,8%, and 34,87% respectively (<https://moh.gov.jo/>, Accession date: 10 January 2020).

### **3.1.3. Study population and sample**

The population for this study is all healthy pregnant women who received antenatal care in the recruited settings of north Jordan.

The researchers used the statistics of Jordanian Ministry of Health ([www.moh.gov.jo](http://www.moh.gov.jo), Accession date: 10 March 2019) to estimate sample size. The total pregnant women in every month of the year of 2018 were calculated in each center. This total numbers includes the new cases, recurrent cases and recurrent cases in third trimester of pregnancy. The healthy pregnant women was estimated by subtracted the total number of women who received care at that center from the number of women who had classified as risky case; mild, moderate or severe risk. The total healthy pregnant women in all these centers were 796 women in a year of 2018. Then, the total number of healthy pregnant women in one month (25 days) in the previous mentioned four centers was 66 (by dividing 796 by 12 month). In the data collection time, which was around 68 days, the total number was 179 healthy pregnant women. The total number in the outpatient clinic was estimated as doubling this number 1592 (this was determined by asking the staff in that clinic). The time for data collection in this clinic was 17 days, then (  $1592/12 \text{ month} = 132,3$ ), the total working days in a month 25 days, then  $132,3 * 17/25 = 90$  ( the total in outpatient clinic in 17 days of data collection). Then the total accessible sample was 269. Seven pregnant women refused to participate in the study because they did not stay

in the waiting area after registration and were busy with other activities around the hospital. Five unanswered questionnaires were not included in the study. Thus, the final sample in our study was 218 and the response rate was 94%. Data was collected from 02. 06. 2018 to 14. 10. 2018.

**Table. 1 Estimation of Study Population and Sample**

<b>Setting</b>	<b>An-Nuayyimah</b>	<b>ALHusn</b>	<b>Alsareeh</b>	<b>Hakama</b>	<b>Outpatient Clinic in Princess Badea Teaching Hospital</b>
<b>Item</b>					
<b>Total Pregnant Women in 2018</b>	711	459	315	276	3184
<b>Healthy Pregnant Women in 2018</b>	375	176	128	117	1592
<b>Total Sample at Time of Data Collection</b>	179				90
					<b>Total Sample: 269</b>

Participants who were available at the time of collecting the data and accepted to participate in the study were recruited. Purposeful sample was used to choose healthy pregnant women from different trimesters in order to gain divergent experiences. To achieve this goal; one nurse or midwife helped the researcher in recruitment process (including the use of participant' records).

The inclusion criteria include pregnant women who were: married (the divorce and widow have mostly negative psychological state that may influence the perceived stress score, so they were not included in the sample), Jordanian nationality, speaking and writing Arabic language, having single fetus, and conceiving naturally. Exclusion criteria included women who had: previous or current adverse obstetric (preeclampsia, recurrent miscarriages) medical (as cardiac disease) or mental disease (as depression), received any medication except pregnancy vitamins, and considered smoker.

#### 3.1.4. Study tools

There are four tools were employed to collect data in first step of thesis: Socio-demographic and obstetric questionnaire, SF-36 questionnaire, Perceived stress scale (PSS), and Multidimensional scale of perceived social support (MSPSS). The detailed explanation of these tools as the following:

**Socio-demographic and obstetric questionnaire** contained items about: the maternal age, level of education, total monthly income, employment, parity (number of children), gestational age, and planning for pregnancy (Enc. 1).

**The SF-36 questionnaire** was developed by Ware and Sherbourne, as part of the RAND and Medical Outcomes Study, to evaluate the perceived QOL in the areas of physical and mental health (Ware & Sherbourne, 1992; RAND, [www.rand.org/health-care/](http://www.rand.org/health-care/), Accession date: 12 June 2018). The SF-36 includes eight domains: physical functioning, role limitations due to physical health problems, role limitations due to emotional problems, social functioning, general mental health (psychological distress and psychological well-being), bodily pain, vitality (energy/fatigue), and general health perception (Enc. 2). The subscale scores range from 0 to 100; 0 indicates poor health and 100 is the best state of health (Khader et al. 2011; Ware & Sherbourne, 1992). The total scores were converted to percentiles and classified as low (0–33), moderate (33,4–66,6), or high (66,7–100). The alpha coefficients of the SF-36 ranged from 0,73 to 0,81 (Ware & Sherbourne, 1992). The scale is also used to assess the quality of life of pregnant women in many studies (Tavoli et al., 2016; Abbaspoor et al., 2016).

The SF-36 was translated to many languages. The first version of Arabic SF-36 was developed by Coons et al., (1998) among Saudi Arabian citizens (Enc. 3). Khader et al., (2011) examined the psychometric properties of SF-36 among Jordanian adult population. They found that the coefficient alpha was ranged from 0,71 for vitality and general health to 0,90 for physical functioning domain. All items passed the tests for item discriminant validity (Khader et al., 2011). In addition,

Hamaideh (2011) conducted a study to examine the QOL among Jordanian mental health nurses. The alpha coefficient in last mentioned study was 0,92. In the present part of thesis, the internal consistency was 0,86. Permission to use this questionnaire was obtained from RAND (Enc. 4).

**The Perceived Stress Scale (PSS)** was developed by Cohen et al. (1983) to determine the level to which the participants perceive the life situations as stressful. The scale includes 10 questions on a 5-point Likert scale ranging from 0 (never) to 4 (very often) (see Enc. 5). The total score ranges from 0 to 40. The highest level of perceived stress is 40, the medium level is 20, and the lowest PSS score is 0. (Cohen et al., 1983).

In a study of Chayaa et al (2010), the psychometric properties of Arabic version of PSS-10 were examined among pregnant women. The Internal consistency reliability using Cronbach's alpha in Chaaya et al., (2010) was 0.74. The concurrent validity of PSS-10 in the previous study, by comparing it with General Health Questionnaire (GHQ-12) and Edinburgh Postpartum Depression Scale (EPDS), showed a significant positive correlation ( $r = 0,48$  and  $r = 0,58$ ). Besides that, the construct validity was examined by assess its ability to detect significant differences between specific groups of population (Chaaya et al., 2010).

In addition, Al-Gamal and Long (2012) examined the relationship between psychological distress of Jordanian parents, using PSS and Depression Scale, and its relations to child emotional and behavioral problems. Positive correlation was found between the previous mentioned variables ( $r = 0,329$ ,  $p < 0,005$ ;  $r = 0,246$ ,  $p < 0,01$ ). The previous study confirmed that PSS passed the test of concurrent validity. Furthermore, PSS was translated to Arabic language and examined its reliability among Jordanian population by Almadi et al. (2012). The cronbach's alpha coefficient and the intra-class correlation coefficient in previous study were 0,80 and 0,90 respectively. Permission to use to use Arabic PSS was obtained from

Jordanian qualified researcher (Mansour, AH. <a.mansour@ju.edu.jo> (see Enc. 6, Enc.7).

**The Multidimensional scale of perceived social support (MSPSS)** was developed to measure individuals' perceptions of social support from family, friends, and significant others (Zimet et al., 1988). The MSPSS includes 12 items with a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The highest score is 84 and the lowest is 12 (Enc. 8). It is widely accepted as a valid and reliable tool to assess the perceived social support among different population such as women in antenatal and postnatal period (Gul et al., 2018; Yehia et al., 2013).

The Arabic version of the MSPSS was employed to investigate perceived social support among Jordanian parents (Al-Gamal & Long, 2012), Jordanian women in the postpartum period (Yehia et al. 2013), and Jordanian university students (Alorani & Alradaydeh, 2017). Yehia et al. (2013) translated the MSPSS to Arabic version and found that the reliability coefficient of the Arabic MSPSS among Jordanian women in postpartum period was 0,87. In the current part of thesis, the reliability coefficient of the MSPSS was 0,90. Permission to use Arabic MSPSS was obtained from Jordanian qualified researchers (Yehia D <d.yehia@zuj.edu.jo>, and Hamaideh S <shaher29@hu.edu.jo>; Enc. 9 and Enc. 10).

### **3.1.5. Data collection**

Data was collected after obtaining the required permissions to conduct this quantitative part from International review board of Near East University (Code No. YDU/2018/56-538). Also the permission was obtained from Ministry of Health of Jordan (Code No. MOH REC 180014). The researcher met the midwives and nurses who worked in the research settings and arranged a private room for data collection purposes.



Recruitment process of eligible participants occurred by researcher and one staff (nurse or midwife) who recruited participants according to their record and the initial history taking. In the waiting area of the clinic, the researcher provided verbal and written information about the study. The purpose, possible risk, and possible benefit of the study were explained to pregnant women. Women, who accepted to participate in the study and met the inclusion criteria, were transferred to the private room in the clinic to get their written consent and fill out the questionnaire. The QOL questionnaire and the scales were filled out by participants in approximately 20- 25 minutes. Data was collected from 02. 06.2018 to 14.10. 2018.

### **3.1.6. Data analysis**

Data were analyzed using the statistical packages for social sciences (SPSS) software, version 22. Statistical descriptive analysis were used to answer the research question number one; the socio-demographic and obstetric variables were described statistically using frequencies and percentages, while perceived stress and social support were described using means and standard deviations.

To answer research question number two, one-way analysis of variance (ANOVA) was employed to examine the differences in the QOL scores according to the investigated factors. ANOVA is a “statistical procedure for testing mean differences among three or more groups by comparing variability between groups to variability within groups” (Polit & Beck, 2004). In our study, Scheffe post hoc procedure was used to determine which pairs of five parity subgroups’ means were differed significantly.

For research question number three, linear regression analyses followed by stepwise regression analysis were employed to determine the effects of the investigated factors on the QOL. The QOL was the dependent variable, and the other factors were the independent variables. The level of significance in this study was  $p < 0,05$ .

### **3.1.7. Ethical considerations**

This study was conducted after obtaining ethical approval from the Jordanian Ministry of Health (Code No. MOH REC 180014, approved on 29.01.2018, Enc. 11), and the Institutional Review Board of the Near East University (Code No. YDU/2018/56-538, approved on 29.03.2018, Enc. 12). The women invited to participate voluntarily in the study. The women answered the questionnaire in a private room in the health care setting. Informed consent was obtained from the pregnant women who participated in the study (Enc. 13). No anticipated risks or harms and no direct benefits from participating in this study, but the findings that were gained from this study may be beneficial to the others. In another word, the results may promote nursing and health care knowledge, and help in improving the quality of life of pregnant women. No incentives were provided to participants.

After data was collected, the consent form was separated from the questionnaire and kept in an envelope to ensure data privacy and confidentiality. Coding was put to the paper and electronic data instead of personal identification information of women including name, age, and educational level. All of the collected data (in paper format) were stored in a secure and locked cabinet in researcher's home. The electronic data were stored in the researcher's computer by a password. Only the researcher had an access to the paper and electronic data. A contact number was provided to the women participants in case they had any questions or concerns about the study in later time.

## **3.2. Step 2 (Qualitative Part)**

### **3.2.1. Research design**

Descriptive phenomenological design was utilized after conducting the quantitative part in this thesis. It is one of attractive qualitative method in nursing research (Matua, 2015) which aimed to understand the experience of individuals that everyday lives (Streubert & Carpenter, 2011). It contributes in revealing the hidden

and embedded aspects of the experience (Wertz et al., 2011), and generating new rich descriptions about phenomenon from perspectives of those who experience it first-hand (Matua, 2015).

In this step of thesis, the experiences of pregnancy, which consider healthy, of women with four or more children were described from their perspectives. The experiences include high parity women's perceptions, expectations, and realities about having physiologic and psychological changes that resulted from normal pregnancy. In addition to have other factors (such as low socioeconomic status and unplanned pregnancy) that may affect woman's health. The descriptions of participants were elaborated and analyzed under the scope of the QOL and its related factors using face to face interview. Individual interview is a useful tool for exploring in-depth the experiences and perspectives of individuals (Petty et al., 2012).

### **3.2.2. Setting**

Participants were selected initially by contacting the attendances (almost women from different ages) of two fitness centers in one town (An-Naimah) of Irbid city in Jordan, which was easy access to participants by the researcher. These two centers provide their services to all women in An-naimah and its surrounding areas. Generally, Jordanian people who live in this region have shared kinships and common social events and activities. They are socially active and know each other.

The interviews were carried out in a convenient place for pregnant women who have four or more children and met the inclusion criteria. Ten participants were interviewed on their home and the others (4 participants) at researcher home.

### 3.2.3. Sample

The participants were selected in three steps:

Firstly, the researcher was met the attendees (who were women) of two fitness and health centers in area close to the researcher. They were asked if they knew any pregnant women who had four or more children. The study protocols and contact information of the researcher were given to them. Then, the contact information of possible participants was given to the researcher by fitness center attendees. Potential participants were asked to participate voluntarily in this study and their verbal consent was obtained. In this step, 19 pregnant women who had four or more children were reached.

Secondly, the potential participants (19 pregnant women), who were accessed in first step, were asked to find other pregnant women (having four children or more). For this reason, snowball sampling technique was used to select pregnant women. Snowball sampling is based on referrals to find other participant, which is costly effective and time consuming for selection of participants (research-methodology.net. Accession Date: 03.03.2020). The participants in the first step contacted the researcher and gave her the phone number of new participants after taking their informed consent for participation in the study. In this step, nine pregnant women were reached.

Lastly, the participants, who found in first and second step, were contacted by the researcher to determine the eligible one according to the inclusion criteria. The total potential participants who were reached in first and second step were 28 (in first step was 19 and in second step was 9). Nine of them were excluded because were not met the inclusion criteria (see the subheading 8.4.3.). Purposive sampling technique was employed to determine the eligible participants. Purposive sample is defined as a conscious selection of subjects by a researcher based on the characteristics they desire supported by rationale for selection (Burns & Grove, 2005).

The number of participants was determined as the data will be saturated. In phenomenological study, Creswell (2013) suggested to use sample of at a minimum three to a maximum 15 participants. Therefore, in qualitative part, the number of participants was 14. The inclusion criteria were:

- Jordanian nationality women.
- Married women.
- Having four children or more.
- Reading and writing Arabic language.
- Free from any previous or current obstetric health problems (miscarriage, gestational diabetes, etc.).
- Free from any previous or current systematic health problems (Diabetes mellitus, hypertension, etc.).
- Having single fetus and conceiving naturally.
- Nonsmoker's women.

#### **3.2.4. Data collection**

Data were collected using face to face, in depth, semi -structured interview which was recorded by digital voice recorder. The researcher did conversations with women and generated questions based on their narration (Zhang & Wildemuth, 2009).

During the interview, the researcher observed the non-verbal language of participants, such as facial expressions, gestures, and the tone of voice. This non-verbal data could provide clarification, discovery, emphasis, and verification of verbal data (Denham & Onwuegbuzie, 2013). This data was used during transcription process. Then, the recorded data were checked by one nurse expert in qualitative research to check quality of interview and the transcribed data. The researcher had an experience in collecting qualitative data by interview. The researcher performed interview in previous qualitative study and previous graduate

qualitative course. The researcher provided clinical course (physical examination) for undergraduate students including carrying out interview.

Initially, the researcher asked the high parity women to participate in this study. The eligible women who accepted participation in the study was informed consented and given written information sheet about the study (Enc. 14).

The Consent form included: the purpose of the research, risk and benefit of study, Information about voluntary participating and withdrawing from the study, Contact information; the consent form included the researcher's name, phone number and the institution's address, the signature of the researcher and participant, witness name and signature, telephone number of participant, and the date of interview.

The first interview started by asking participants about their: socio-demographic data (age, income, educational level, type of family, and house type and characteristics), obstetric data ( gestational age, number of antenatal visits, planning pregnancy, gender of children, interspacing between their children, and type of health care setting that had been used). Then, the researcher started asking the primary question. At the end of first interview, the researcher thanked the participant and determined the possible next interview after one week from the first one. In that, due to limited time (one month) for data collection, extracted themes may need more than two interviews from participants.

At the beginning of next interview, a transcribed written report of previous recorded interview was given to participant to read it. After she provided agreement regarding the written data, she signed the report. Then, the investigator summarized the participant's perceptions in previous interview and started the next interview. Each interview took around 30- 45 minutes. There were around two interviews in average for each participant, because there were no new themes were added to the transcribed data, despite the fact that the saturation of data was unpredictable (Visram et al., 2018).

The researcher prepared for conducting the interview. The preparations included: Contacting the participants; to ensure their participation and determining the appropriate time and place of the interview, Checking the place of interview. It was prepared to be; free from any interruptions, excessive light and noise, comfortable for the participant and researcher. Before the interview, the researcher asked the participant about her emotional status (if she was ready for interview emotionally). This was organized according to suitable time and comfortable place for participants, women's emotional status, and making good preparation of the equipment. For example, the voice recorder checked if it was working before starting the interview.

The researcher in the interview used open- ended questions. The primary question was: What are the lived experiences of pregnancy (which is considered healthy) in high parity women in Irbid city in Jordan?

The sub-questions were:

- What is your personal experience of being pregnant while having four children or more?
- What is your feelings of being pregnant and taking care of four children or more?
- What is your thoughts of being pregnant and taking care of four children or more?
- Please describe your general health during pregnancy?
- What is your husband role during pregnancy toward house work duties?
- What is your husband role during pregnancy toward taking care of your children?
- What do you do when you face a problem with house work?
- How do you feel toward taking care of four or more children?
- How you take care of yourself during pregnancy?
- How you solve any health problem? Who support you?

The researcher asked other questions to get more information about the topic of conversation such as: “what do you feel about that”, “How did that happen?”, “Can you give example about that?”, and “What did you think about that”.

### **3.2.5. Data analysis**

Analysis of the transcribed interview was performed using Colaizzi's (1978) method of analysis, it includes the following steps:

1. The transcribed interviews were read and reread by the researcher until the feelings and thoughts about the experiences of high parity women in pregnancy were acquired.
2. The significant statements that were related directly to the experience of high parity women in pregnancy were extracted. Some examples of these statements were displayed on results section.
3. Cluster of meanings were formulated based on significant statement.
4. The researcher categorized the formulated meanings into clusters of themes.
5. The researcher integrated the formulated themes to form exhaustive descriptions of the experience of high parity women in pregnancy.
6. The researcher formulated statements according to the exhaustive descriptions which captured the lived experiences of high parity women during pregnancy.
7. The descriptions were validated by returning it to the participants for confirmation. All participants agreed with the researchers in their statements (Credibility will occur by returning the descriptions to the participant for confirmation).

### **3.2.6. Evaluation criteria (Trustworthiness)**

It is important in qualitative research to confirm the accuracy and clarity of the descriptions of a phenomenon. There are many rigorous techniques identified to evaluate the quality of the data, or what is called trustworthiness of data. Lincoln and Guba's (1985) method of evaluation was used to assess the trustworthiness. It is the



most common method to determine the rigor of qualitative study. It consists of four measures: credibility, transferability, dependability, and conformability.

**Credibility** refers to authenticity of data. Authenticity means that the data are a true reflection of participant's experience of phenomena under study (Vivar et al., 2007). In this study, credibility was carried out by: returning back the transcribed descriptions of previous interview to participants to check its truth and comparing the transcribed interviews of participants at different points of time.

**Dependability**: to check the stability and consistency of research process over time (Dependability) (Lincoln and Guba, 1985), the researcher process was reviewed by another qualitative expert researcher in order to confirm the study findings.

**Conformability** reflects the degree that the findings are a product of inquiry and not the bias of researcher (Guba, 1981, Lincoln and Guba, 1985). The researcher documented all the steps of the study including data collection and data analysis.

**Transferability** is to which extent the research findings will be applicable in other settings or contexts (Lincoln & Guba, 1985, Petty et al., 2012). The researcher recruited a heterogeneous sample, the Women will vary in according to their socio-demographic characteristics and gestational age and other factors.

### **3.2.7. Ethical considerations**

Ethical approval was obtained from the Institute of Review Board in Near East University. Informed consent was taken from the women in verbal and written form. Before each interview, process consent was confirmed verbally. Confidentiality was maintained; only the researcher had access to the information, and all the data were labeled with a non-descriptive identifier. These codes were used instead of the participant's name and address. Additionally, the codes were used to the transcribed interview, recorded data, findings, and any published report about the research.

## 4. RESULTS OF STEP 1

### 4.1. Descriptive Statistics

**Table 2. Characteristics of the Pregnant Women (n = 218)**

<b>Variables</b>	<b>n</b>	<b>f%</b>
<b>Age</b>		
Less than 19 years old	10	4,6
20–25	61	28,0
26–30	68	31,2
31–35	43	19,7
36 or more	36	16,5
<b>Educational Level</b>		
Primary school	12	5,5
Secondary school	73	33,5
College diploma	45	20,6
Bachelor's degree	79	36,2
Graduate degree	9	4,2
<b>Occupation</b>		
Housewife	162	74,3
Part-time worker	21	9,6
Full-time worker	35	16,1
<b>Total Monthly Income</b>		
Less than JD* 450	110	50,5
JD450–800	80	36,7
More than JD 800	28	12,8
<b>Parity</b>		
0	60	27,5
1	40	18,3
2	46	21,1
3	34	15,6
4 or more	38	17,5
<b>Gestational Age</b>		
1st trimester	56	25,7
2nd trimester	79	36,2
3rd trimester	83	38,1
<b>Planned Pregnancy</b>		
Yes	113	51,8
No	105	48,2

\*Jordan dinar, 1 JD = 1,41 USD .

In table 2, a total of 218 pregnant women participated in this study. Approximately one-third of participants (31,2%) were aged 26-30. Just 4,6% of women were under the age of 19. The majority of women were reported completing either a bachelor degree (36,2%) or secondary education (33,5%). While the lowest proportion were reported having primary school (5,5%) and graduate education (4,2%). Three- quarters of women were non worker (74,3%). A further 25,7% were either fulltime worker (16,1%) or part time worker (9,6%). Over half of all women had total family income less than 450 Jordan Dinars (JD = U.S. \$1,41). Respective proportions of women with family income JD 450- 800 JD and more than 800 JD were 36,7% and 12,85%.

The obstetric characteristics of sample were: 27,5% of women had no child and 17,5% of women had four children or more. According to gestational age, the percentages of pregnant women who were in first, second and third trimester was 25%, 36,2%, and 38,1% respectively. The women of planned and unplanned pregnancy had approximately the same participating rate (planned pregnancy = 51,8%, unplanned pregnancy = 48,2%).

**Table 3. The Mean Scores of QOL, Perceived Stress, Perceived Social Support among Healthy Pregnant Women**

<b>Scales</b>	<b>Mean±SD*</b>	<b>Min-Max</b>
<b>QOL Subscales</b>		
Physical functioning (10 questions)	57,8±22,733	15-100
Role limitations due to physical health problem (4 questions)	37,16±36,259	0-100
Role limitations due to emotional problems (3 questions)	42,97±41,031	0-100
Energy/fatigue (4 questions)	42,45±17,833	0-95
Emotional well-being (5 questions)	52,68±19,855	0-96
Social functioning (2 questions)	58,89±22,463	0-100
Pain (2 questions)	54,909±24,386	0-100
General health (5 questions)	59,77±14,542	15-100
Total quality of life	51,85±14,705	14-89
<b>Total PSS (10 questions)**</b>	<b>20,26±5,697</b>	<b>0-3,5</b>
<b>MSPSS***</b>		
Significant other(4 questions)	23,39±5,164	1-7
Family (4 questions)	22,20±5,488	1-7
Friends (4 questions)	18,18±5,964	1-7
Total MSPSS	63,78±13,816	

\*SD: Standard deviation

\*\* PSS: Perceived stress scale scores

\*\*\*MSPSS: Multidimensional scale of perceived social support

The total mean scores of quality of life, perceived stress, and perceived social support were 51,85; 20,26; and 63,78 respectively. In the quality of life subscales, the lowest score was observed in the role of physical functioning subscale (mean = 37,16, SD = 36,25) and the highest score was the general health (mean = 59,55, SD = 14,54) followed by social functioning (mean = 58,89, SD = 22,46 see table 3).

Regarding the sources of social support, the lowest score was demonstrated on the friend's subscale (mean= 18,18, SD= 5,96) and the highest score was in significant other subscale (mean= 23,39, SD = 5,16). The mean score of family subscale was 22,19 (SD = 5,48, see table 3).

#### 4.2. Inferential Statistics

**Table 4. Differences on QOL Using One-Way ANOVA According to Socio-demographic and Obstetric Factors (n = 218)**

Variable	N	Mean±SD	F	p-value*
<b>Age</b>				
≤19 years old	10	61,04±11,374	2,261	0,064
20–25	61	52,02±11,965		
26–30	68	51,72±15,078		
31–35	43	53,86±17,364		
≥36	36	46,88±14,502		
<b>Education</b>				
Primary school	12	60,35±13,746	2,360	0,054
Secondary school	73	50,30±12,319		
College diploma	45	49,51±15,740		
Bachelor's degree	79	52,35±16,041		
Graduate degree	9	60,56±10,909		

Continue; Table 4.

Variable	N	Mean±SD	F	p-value*
<b>Occupation</b>				
Housewife	162	52,1±14,173	0,116	0,890
Part-time worker	21	50,51±18,045		
Full-time worker	35	51,54±15,354		
<b>Total monthly income</b>				
Less than JD** 450	110	52,45±13,522	0,186	0,830
JD 450–800	80	51,15±16,256		
More than JD 800	28	51,52±14,949		
<b>Parity</b>				
0	60	54,52±13,968	2,413	0,05
1	40	54,41±13,251		
2	46	51,36±14,993		
3	34	51,40±16,265		
4or more	38	45,95±14,409		
<b>Gestational age</b>				
1st trimester	56	52,59±15,068	1,220	0,297
2nd trimester	79	53,37±13,700		
3rd trimester	83	49,91±15,328		
<b>Planned pregnancy</b>				
Yes	113	51,65±13,7 47	0,047	0,829
No	105	52,08±15,7 34		
Total	218	51,85±14,7 05		

\*The p-values were calculated using ANOVA

\*\*Jordan dinar, JD 1 = USD 1,41.

The differences in the QOL scores of pregnant women according to their socio-demographic and obstetric characteristics were displayed in table 4. One-way ANOVA was used because there were more than two independent groups in the sample. The results showed that the statistical significant differences in the QOL scores were only found between parity subgroups ( $F = 2,413$ ,  $p = 0,05$ ).

The highest mean score was reported among women who were; in age of 19 years or less (mean = 61,04,  $F = 2,261$ ,  $p = 0,064$ ), had a graduate degree (mean = 60,56,  $F = 2,36$ ,  $p = 0,54$ ), considered a housewife (mean = 52,10,  $F = 0,116$ ,  $p = 0,89$ ), had income less than 450 JD (mean = 52,45,  $F = 0,186$ ,  $p = 0,83$ ), not had a child before (mean = 54,52,  $F = 2,413$ ,  $p = 0,05$ ), in second trimester of pregnancy (mean = 53,37,  $F = 1,22$ ,  $p = 0,297$ ), and not planned for pregnancy (mean = 52,08,  $F = 0,047$ ,  $p = 0,829$ ) ( see table 4).

**Table 5. Scheffe Post Hoc Test Comparisons of QOL According to Parity Factor**

<b>(I) Parity</b>	<b>(J) Parity</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>p-value</b>
<b>0</b>	1	0,11	2,963	0,970
	2	3,16	2,845	0,268
	3	3,12	3,116	0,318
	4 or more	8,58*	3,010	0,005
<b>1</b>	0	-0,11	2,963	0,970
	2	3,05	3,138	0,332
	3	3,01	3,386	0,375
	4 or more	8,47*	3,289	0,011
<b>2</b>	0	-3,16	2,845	0,268
	1	-3,05	3,138	0,332
	3	-0,04	3,283	0,990
	4 or more	5,42	3,182	0,090
<b>3</b>	0	-3,12	3,116	0,318
	1	-3,01	3,386	0,375
	2	0,04	3,283	0,990
	4 or more	5,45	3,427	0,113
<b>4 or more</b>	0	-8,58*	3,010	0,005
	1	-8,47*	3,289	0,011
	2	-5,420	3,182	0,090
	3	-5,450	3,427	0,113

\* The mean difference is significant at the 0,05 levels. \*\* Scheffe post hoc test was used



In Table 5, there was a statistically significant difference in parity factor ( $p = 0,05$ ) between none and four or more in favor of none , and between 1 and four or more in favor of 1. In other words, high-parity women had significantly lower QOL than low-parity women (those with no children or just one child). Although there were no differences in the QOL according to gestational age, women in the third trimester of pregnancy had the lowest mean QOL score (mean = 49,91, SD= 15,328), while those in the second trimester had the highest mean QOL score (mean = 53,37, SD = 13,7).

**Table 6. Linear Regression Results for Factors Influencing Quality of Life**

<b>Variables</b>	<b>Standardize d Beta Coefficients</b>	<b>T</b>	<b>Sig</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>F</b>	<b>p- value*</b>
<b>Age</b>	0,022	0,234	0,815	0,244	0,06	1,463	0,164
<b>Educational level</b>	0,044	0,569	0,570				
<b>Total monthly Income</b>	-0,068	-0,914	0,362				
<b>Occupation</b>	-0,020	-0,258	0,796				
<b>Parity</b>	-0,182	-0,936	0,350				
<b>Gestational age</b>	-0,091	-1,316	0,190				
<b>Planned pregnancy</b>	0,060	0,872	0,384				
<b>PSS**</b>	-0,054	-0,777	0,438				
<b>MSPSS***</b>	0,083	1,205	0,229				

\*The p-value was calculated using regression analysis.

\*\*PSS: Perceived stress scale scores

\*\*\*MSPSS: Multidimensional scale of perceived social support

In table 6, linear regression analysis was employed to determine the effects of the investigated factors on the QOL. The QOL was considered as a dependent variable and the other factors as independent variables. The results showed that the

investigated factors explained 6% of the variance in the QOL. None of the independent variables were related to the QOL ( $F = 1,464$ ;  $p = 0,164$ ). For this reason, linear regression analysis followed by stepwise regression analysis.

**Table 7. Stepwise Regression Results for Quality of Life According to Parity**

	<b>Standardized Coefficients Beta</b>	<b>T</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>F</b>	<b>p-value</b>
<b>Parity</b>	-0,192	-2,876	0,192	0,037	8,274	0,004

Dependent variable: Quality of life.

Stepwise regression analysis was used

Stepwise regression analysis was employed as seen in table 7. The independent variables are evaluated for entry into the regression equation under both forward selection and backward deletion criteria. The variable that correlates significantly with the dependent variable remains in the equation (Robert, 2006). In this study, Table 6 showed that's only parity factor had a significant effect on the quality of life of pregnant women, and explained 3,7% of the variance ( $R = 0,192$ ;  $F = 8,274$ ,  $p = 0,004$ ).

## 6. RESULTS OF STEP 2

**Table 8. Characteristics of Participants (n = 14)**

Participant	Age	Education	Job	Income	House ownership	Trimester/Parity	Planning pregnancy	Antenatal Care
P1	40	Bachelor	Teacher	Satisfied	Yes	3 <sup>rd</sup> /5	Yes/Wanted & Desired	Not done after 4 <sup>th</sup> month
P2	32	Bachelor	Unprofessional/Part Time	Satisfied	Yes	1 <sup>st</sup> /4	No/ Unwanted	No care
P3	35	Secondary Education	Cleaner	Satisfied	Yes	2 <sup>nd</sup> /4	Yes/Wanted & Desired	Yes
P4	38	Secondary Education	Housewife	Unsatisfied	Yes	2 <sup>nd</sup> /5	No/ Wanted	Yes
P5	34	Secondary Education	Housewife	Unsatisfied	Yes	3 <sup>rd</sup> /4	Yes/Wanted	Yes
P6	27	Secondary Education	Housewife	Unsatisfied	No/Rented	2 <sup>nd</sup> /4	No/Wanted	Yes
P7	30	Primary	Housewife	Unsatisfied	Yes	1 <sup>st</sup> /4	No/Unwanted	No
P8	38	Bachelor	Teacher	Satisfied	Yes	2 <sup>nd</sup> /4	No/Unwanted	Yes
P9	34	Primary	Housewife	Satisfied	Yes	2 <sup>nd</sup> /5	Yes/Wanted	Yes
P10	40	College Diploma	Housewife	Satisfied	Yes	3 <sup>rd</sup> /4	Yes/Wanted	Yes
P11	32	College Diploma	Nurse	Satisfied	Yes	1 <sup>st</sup> /4	No/Wanted	Yes
P12	33	Secondary Education	Housewife	Satisfied	Yes	3 <sup>rd</sup> /4	No/Unwanted	No
P13	38	Doctoral	University Lecturer	Satisfied	No/Rent	3 <sup>rd</sup> /4	Yes/Wanted	Yes
P14	37	Master	Physician	Satisfied	Yes	1 <sup>st</sup> /4	Yes/Wanted	Yes

The participants in this study were 14 and their age ranged from 27 to 40 years old (Table 7). There are many themes were extracted from verbatim transcriptions as mentioned below:

### 1. Experienced new discomforts in this pregnancy

Generally, the pregnant women in first trimester complained from nausea and vomiting, heart pain in second trimester, and back pain and sleeplessness in third trimester. Other discomforts or pregnancy related symptoms were experienced only in this pregnancy as participants said. They think that the causes were related

to their advanced age (over 35 years old) or having additional responsibilities. For example:

- *“This pregnancy is very hard for me, I feel of tired and exhaustion, I have varicose vein in my legs and also in genital area that was not appear in previous pregnancies, I feel of difficulty when I want to sit down and very tired when I am walking even short distance or long distances. Discomfort when I change my position. I think that was related to working in (picking olives) which takes a lot of physical efforts... I had also urinary incontinence. I think its affect our health” P4.*
- *“We build new home, there is a lots of things to do, ..., I prepared food for employees and help my husband on cleaning and rearrange the area after the employees go home. I complain of sever lower back pain. I could not sleep well because feeling of tired and exhaustion... Being on older age and having a lot of physical efforts may have a role in developing this problem and feeling of tired” P5.*
- *“When I arrive home after spending hard time in my job place, I feel of sever tired, back pain. I go to sleep directly and ignore all my house responsibilities. When pregnant women become older and older, the pregnancy will become more difficult. I feel very tired and exhausted in this pregnancy not as previous pregnancies” P10.*

## 2. Experience of new responsibilities or roles in addition to routine roles.

Most participants carried out routine daily duties such as; preparing children to going to school in the morning, cooking, keeping her home clean, and helping their children in performing their school homework’s. It was found that most participants had other additional duties. For example:

- *“I take care of my ill husband. He has cardiac disease. He spent 2 weeks in Intensive Care Unit. He did cardiac surgery. For 2 weeks, I went daily to my work, then directly went to hospital and stayed there until evening. Now he*

*discharged from hospital. And he needs special care. You know how is society response to someone discharge from hospital. A lots of guests all the time” P13.*

- *“We build new home, there is a lots of things to do, and we do not have enough money to bring extra employees to do these things. I prepared food for employees and help my husband on cleaning and rearrange the area after the employees go home and when they were not to come to work. Building new homes needs a lot of preparation. It takes a lot of time and some time I did heavy physical works” P5.*
- *“My husband is working outside (the name of her country). I did everything for my children. And I buy all home items and requirement. I go to school and ask about my children. And I pay all bills in addition to other routine responsibilities” P12.*

### 3. Coping issues (Seek help and support from family members)

The older child of Most participants was female and above 14 years old. Most of women received help from them in performing some duties such as cleaning and arranging the home. The husband mostly provided emotional support but his duties in child care and home work were limited with some variations between participants. Also, most of women received emotional support from their mothers or sisters. Examples of participants’ statements:

- *“I have many roles and responsibilities. But my old daughter (14 years old) helps me in doing some home duties. My husband does not participate on housework or child care. But he listens to me and share with him any events happen with me” P9.*
- *“My older children is female and she did everything,, cooking , cleaning the home, she did not studying well, she like to do home duties” P7.*

- *“I have 3 sons. I make a schedule and distribute responsibilities between them. For example, today (name of one of her son) is responsible about toilet cleaning. The other one is responsible about dish washing” P13.*
- *“My husband is very collaborative. He supports me in everything. He helps me in teaching my kids and doing their school home works. He goes with me for antenatal checkup, he listens to me and I share with him any problem” P14.*
- *“I feel of rest when I talk with my sister or my mother or visit them” P6.*

#### 4. Seeking antenatal care

The transcribed statements revealed that planning pregnancy and knowing the gender of fetus affect the antenatal care follow up. Three participants who had unwanted pregnancy, and one participant who know the gender of her baby, were not interested to make antenatal checkup. For example:

- *“ ‘..O’ (her tone of voice reflects her unhappiness toward the gender of her baby), no need for antenatal checkup. I know everything from my experience. I will go next week to know the position of fetus for birth” P1.*
- *“I do not plan for this pregnancy. I did pregnancy test at home by urine kit. Till now, I am not go for antenatal checkup. I convince myself that I am not pregnant” P2.*
- *“My husband is working outside (the name of her country).... I do not want this pregnancy... I do not take vitamins or go to doctors for antenatal checkup”P12.*

## **6. DISCUSSION**

### **6.1. Discussion of Main Findings**

The purpose from conducting this thesis was to determine factors influencing the QOL of Jordanian women during pregnancy. Regarding the demographic characteristics of participants, the results of step quantitative part revealed that the proportions of women who were in teenage pregnancy, primary school, graduate education or having high income were low in comparison to the other groups of participants (the respective proportion of participation was: 4,6%, 5,5%, 4,1%, 12,8%; see table 2). In facts, this was consistent with Jordanian statistics. The teenage pregnancy rate was 5% (Department of statistics and ICF, 2019). The illiteracy rate decreased to 7,2% and the unemployment rate increased to 28.5% among Jordanian married women in 2018 ([www.dos.gov.jo/](http://www.dos.gov.jo/), Accession date: 10 June 2019). In that, women who have occupation, getting high educational level (Mazzoni, et al., 2016), and receiving high income tend most likely to receive maternal care from private settings rather than public settings.

The pregnant women in this step one had moderate QOL scores (mean = 51,85, see table 3). Consistent results were reported by United States pregnant women (mean = 49,37–51,14) (Altazan et al., 2019), Turkish pregnant women (mean = 44,6–59,9) (Taşdemir et al., 2010), and Jordanian adult women in two respective studies (mean = 52; mean = 65,9) (Alazzam et al., 2011; Khader et al., 2011). The previous studies were relatively had the same mean scores as our study except the study of Khader et al., (2011) which had higher QOL mean scores than our results. The QOL in previous study was examined in adult women and men while our study on healthy pregnant women. Therefore, this may provide evidence that pregnancy is a stressful life event in women's life and affect their QOL.

Our results in step one showed that the highest mean score of QOL were reported among adolescent (mean = 61,04) and graduate degree women (mean = 60,56) (Table 4). The participating rate for the previous groups was low. Inconsistent findings reported in a study of Dagler et al., (2019). Higher QOL scores were reported among pregnant women who had education level above primary school. This explained by: the previous study had different categories of educational level (illiterate, ore secondary school, and high school or above) than the quantitative part of present thesis. Furthermore, the number of participants in our study in some categories was very low.

In step one of this thesis, the results go in line with other studies regarding the differences in QOL according to gestational age ( $p = 0,297$ , table 4). For example, Mazúchová, et al. (2018) and Wang et al. (2013) found that the QOL scores were not differed between the trimesters of pregnancy. The previous finding was consistent with the studies of Fatemeh et al., (2010), Taşdemir et al., (2010), and Vachková et al., (2013). This explained by the fact that, such differences in the QOL between the periods of pregnancy linked to the presence of pregnancy related symptoms and discomforts. For example, the women have experience of nausea and vomiting in first trimester (Bai et al., 2016; Balíková & Bužgová, 2014) and urinary incontinence in third trimester (Kok et al., 2016) which may inversely affect the QOL of pregnant women. However, it is required to conduct further research on the prevalence of these discomforts and its impact on QOL of pregnant women.

Regarding perceived stress, it did not affect the QOL of pregnant women (table 5). Other studies found inconsistent findings. Low QOL of pregnant women was related to high perceived stress (Lau & Yin, 2011; Shishehgar et al., 2013; Shishehgar et al., 2014). Similar perceived stress score was reported among Jordanian women. The total mean for PSS was 27,0 (SD = 9,33) (Al-Gamal & Long, 2012).



Parity was only factor that was related to QOL during pregnancy in step one of this thesis ( $p = 0,05$  in table 4,  $p = 0,004$  in table 7). High parity women had lower QOL scores than low parity women. Calou et al., (2018) found that parity factor was considered as strong predictor of QOL and it was associated with family relationship. For example, the first experience of pregnancy for women may allow establishing family bond and receiving high social support. Similar findings were reported in other studies that were conducted during pregnancy (Dağlar et al., 2019; Calou et al., 2018; Mazúchová et al., 2018; Balíková & Bužgová, 2014). The qualitative part of this thesis provide detailed explanation about why high parity women had poor QOL during pregnancy and what are the hidden factors that affected the QOL of high parity women during pregnancy. The results in step two showed additional issues (Themes) that concerned QOL during pregnancy as explained below:

- Experience of new discomforts in this pregnancy

Most of pregnant women felt of tiredness and exhaustion in this pregnancy. Some of them had new symptoms that were not experienced in previous pregnancies. It was believed that being older and having new life event contributed in developing such discomforts and deteriorated woman's health. In a study of Klemetti et al., (2011) in England, older multiparous women (35 years or more) reported some pregnancy related discomforts than other younger women(25-34 years old) such as; varicose vein, hemorrhoids, carpal tunnel syndrome, and stress incontinence. The previous researchers asserted the adverse influences of such discomforts on women's daily life.

Other study found that most of multiparous women who had low back pain were older and more likely to have sleep disturbances than primiparous women with low back pain (Mota et al., 2015). In previous study, low back pain prevented pregnant women from doing their daily activities. Moreover, de Oliveira et al., (2013) reported that urinary incontinence was significantly related to high parity factor and negatively affect the quality of life of pregnant women. In nursing practice, it is

required to assess pregnancy related discomforts and provide required interventions in order to promote the QOL of high parity women. Further research is required that investigate the pregnancy related discomforts and effects on high parity women's health and QOL.

- Experience of new responsibilities or roles in addition to routine roles.

Generally, woman has a number of social roles such as wife, daughter, employee, and mother (Willigen, 2014). Also, she becomes pregnant as natural role. In this step two, the results showed that all pregnant women had other responsibilities in addition to their routine multiple duties such as, cooking, house work responsibilities, and school homework duties. Additional roles may contribute on adverse mental and physical health (Willigen, 2014), and lead to poor QOL. This finding was consistent with the study of Nakajima et al., (2013); the poor physical and psychological health of high parity women during pregnancy was related to have huge responsibilities toward their family in addition to physiologic changes of pregnancy. Other Brazilian study (Coll et al., 2017) found that high parity women, who had two or more children, may unable to cope effectively with parenting stress toward new child in addition to care of other children, which increase the risk for antenatal depression.

Furthermore, Malhotra et al. (2014) found that the happiness level decreased in pregnant women who had one child or more. The drop in happiness level may be explained by increased duties of high parity toward their children besides the additional financial and domestic responsibilities. Nursing interventions should be directed toward individualized care of high parity women, including comprehensive assessment of the multiple stressors or factors and the available coping resources, in order to promote physiologic and psychological health of high parity women during pregnancy.

- Coping issues (Seek help and support from family members)

The results showed that most pregnant women seek support from their family members such as their husband, children, and other family members. Mostly, woman's mother and sister provided emotional support. While, the husband and their children provided instrumental support (such as: taking care of young child) in addition to emotional support. They were considered as a good source of support. Furthermore, the age and gender of their children contribute in this issue. Most of their oldest children was female and in adolescence age. This participated in decrease the housework duties of women.

In step one of this thesis, social support was not influence the QOL of pregnant women ( $p = 0,164$ ;  $F = 1,464$ , table 6). In contrast, some studies found that QOL in pregnancy was correlated positively with social support (Gabbe et al., 2012). The total mean scores of MSPSS in qualitative part of thesis were consistent with the results for Jordanian women. The total mean scores of MSPSS was 58,9 (SD = 15,1) (table 3). The highest mean scores were demonstrated in family and significant others subscale (Al-Gamal & Long, 2012).

In a qualitative study in Iran, Kazemi et al., (2017) explored factors that influence QOL of pregnant women. They found that women satisfied with support that was received from their family members and husband. Gul et al., (2018) and Shishehgar et al., (2013) reported that social support was positively affect the QOL of pregnant women. During pregnancy, most Jordanian women received high level of social support from their husbands, families, and friends (Alyahya et al., 2019). The experience of pregnancy may strength the family relationship because it was viewed as a positive life event.

Nakajima, et al. (2013) suggested considering husband role (e.g. care of older children and providing support for house work) in nursing care as supportive person for high-parity women, by increasing their parenthood role to unborn child and

providing care for older children. Social support interventions should be included in maternal health promotion programs particularly for high parity women.

- Seeking antenatal care

In results of step two, there are two factors that may influence pregnant women engagement in antenatal care; the gender of baby against women's preferences and undesired pregnancy. In Iranian qualitative study, the researchers explored the QOL of pregnant women and its related factors. The results revealed that the gender of fetus was one of the pregnancy related concerns that could affect women's QOL during pregnancy (Kazemei et al., 2017). In Jordanian study, pregnant women with female fetus had more risk to less than adequate antenatal care than women who had male fetus. Generally, Jordanian women have strongly preferred to get male baby (Al-Akour, 2008).

Regarding unplanned pregnancy, the results of step one showed no significant difference in the QOL between women with planned and unplanned pregnancies ( $p = 0,829$ ,  $F = 0,047$ ; table 4). Similar findings were documented in other studies (Garipey et al., 2017; Li et al., 2012). In step one, planning pregnancy was measured as planned or unplanned. This categorization did not reflect women's intension toward pregnancy. In fact, unplanned pregnancy does not always associate with uncertainty, loss of control, stress, ambivalent emotions, or negative feelings toward pregnancy. Women may accept the reality of being pregnant, cope positively, and be happy specifically when they receive good social support, as evidenced by our results.

Therefore the results of step two showed that even pregnancy unplanned but it may be wanted. And, unwanted or undesired pregnancy was associated with less or delay antenatal care. Dibaba et al. (2013) found that women of unwanted pregnancy postponed their antenatal care and performed fewer antenatal visits. While, Khajehpour et al. (2013) found that; unplanned pregnancy has been linked to poor QOL, less antenatal care, and risky behaviors. The longitudinal study of Wang et al.,

(2013) revealed that feeling of happiness about pregnancy were associated with good QOL in mental and general health dimensions. Future research should quantitatively investigate planning pregnancy based on evidence based research and valid instrument.

High parity and older women had late, fewer, or no prenatal care at all as found on Nepalese study (Neupane & Doku, 2012). Similarly, Alkhaldi, (2016) and Tsawe et al. (2015) found that the usage of antenatal health services among high-parity women was less frequently than low-parity women. Less or inadequate antenatal care was associated with adverse perinatal outcomes such as still birth and congenital malformation (Bililign Yimer et al., 2019). Empowering and educating women could increase the use of antenatal care services and thus promote maternal health and QOL.

Generally, in Jordanian society, pregnancy is viewed as a positive life event, and the family has strong bond and good relationship. Consequently, Jordanian women and their family have positive feelings and emotions, especially when the pregnancy has been planned. However, the experience of normal body changes in pregnancy may cause psychological discomforts and stress. Social support as emotional coping intervention plays a significant role in buffering the negative effect of stress (Cohen & Wills, 1985). Positive coping strategies (such as positive healthy behavior) are associated with good QOL (Mirabzadeh et al., 2013).

In summary, it was found that each women had a unique experience during pregnancy and exposed to varied and multiple stressors. There was no independent factor associated with women's health or QOL during pregnancy. Generally, Women with multiple stressors had experienced adverse maternal outcomes such as sever pregnancy nausea and vomiting, preterm birth, and post partum depression (Mukherjee et al., 2017). Other issue, the qualitative part revealed that women may have positive and negative experiences during pregnancy which may affect their overall QOL. An example of positive experiences, pregnant women may receive

good social support from their family members and adequate antenatal care. While the negative experiences demonstrated on having baby gender against their preferences and a lot of pregnancy related discomforts. This explained why women had moderate QOL in quantitative part. Pregnant women may have some stressors and some protective factors at same time. Therefore, health care providers should provide holistic and individualized care for pregnant women, particularly high parity women. Assessment of all stressful life events and factors that adversely affect maternal health is required to advance the quality of antenatal care and therefore decrease maternal-infant morbidities and mortalities. Further studies, related to QOL in pregnancy, are recommended to determine the needs of pregnant women and improve their QOL.

## **6.2. Strengths and Limitations**

The current thesis has several strengths. Employed mixed method design in present thesis has been provided valuable information and clarification about the issues surrounding QOL during pregnancy particularly parity factor. This researchable phenomenon may be considered as a preliminary works in context of pregnancy in which perceived stress was hypothesized as a predictor of the QOL. In addition this was the first study that investigated QOL and its related factors during pregnancy in Jordan. This may the first study that used the SF-36 among Jordanian pregnant women, which supports previous evidences regarding the reliability of instrument in measuring QOL during pregnancy.

Despite these strengths, there are some limitations that were derived from the interpretations of study results. Firstly, Data in quantitative part was collected one point in time using a cross sectional design. As previously mentioned, women experiences about pregnancy could be changed throughout the stages of pregnancy due to physiologic and psychological adaptation process. The QOL is subjective assessment of individual's perceptions that may change from time to time according to their priorities and expectations.

Secondly, in the qualitative part, the eligibility criteria could not be confirmed by taking information from participant. Data was collected at participant's home and the pregnant woman may hide that she had any health problem. It was best if participants were recruited from maternal health settings. But due to time constraints as imposed by the university, samples were recruited from fitness centers. Furthermore, collecting data needed traveling and approaching the participants in short time. Although the data was collected in one month, the researcher selected the participants with varied characteristics and carried out the required interviews.

## 7. CONCLUSIONS

QOL assessment during pregnancy is essential in health care. Determining the factors influencing QOL is crucial. Using mixed method design enriches our thesis and provide in depth understanding about this phenomenon. The cross-sectional design in first step demonstrates that:

- Only parity influenced the QOL of pregnant women. Lower QOL scores were reported among high-parity women than low-parity women.
- Generally, our results showed than Jordanian women during pregnancy had moderate level of QOL, median level of perceived stress, and high level of social support.
- The most source of support for Jordanian women during pregnancy was family and significant others.
- According to the QOL subscales, the highest score was reported in the general health followed by social functioning, while the lowest scores was demonstrated in role limitations due to physical health problems subscale.
- The highest mean scores of QOL were found in: teenage pregnancy, graduate degree, housewife, low income, in second trimester of pregnancy, and unplanned pregnancy.

The investigated factors in first step of thesis were limited and were not identify the combined or indirect effect of other factors. Consequently, it was followed by qualitative phenomenology design to shed the light on the embedded and ambiguous aspects of the QOL during pregnancy particularly the role of parity factor.

Therefore, the narrative descriptions of pregnant women in second step showed that women experiencing of new discomforts, additional new responsibilities, coping mechanism (social support), and seeking antenatal care could affect the health of



high parity women and their QOL during pregnancy. In this point, the exposure to multiple stressors at same time during pregnancy may lead to poor QOL. For example, it was not confirmed that high parity women with low income had poor QOL, but being caregivers, employee, and performing hard physical work may adversely affect high parity woman's health during pregnancy.

The previous factors could classify as positive and negative effect on the QOL during pregnancy. Receiving high Social support, having older female child, and the gender of fetus according to women preferences are considered as factors that positively affect the QOL of pregnant women particularly high parity women. While, older age (above 35 years), low socioeconomic status (enforced women to participate unprofessional and extraneous job), strenuous life events (such as death of one relative and being caregiver to others) were adversely affect the QOL during pregnancy. This may explained the findings in first step; women generally had moderate QOL and high parity women had poor QOL during pregnancy.

Physical, social, and socio-cultural concerns that elaborated in second step of thesis; revealed new knowledge about the issues that affect women's QOL during pregnancy. Pregnancy related physical concerns demonstrated on experiencing new discomforts as a result of physiologic changes of pregnancy. Social concerns focused on the role of woman as wife, mother, caregiver, and worker. Socio-cultural issues were mainly demonstrated on availability of social support from husband, family, and friends during pregnancy.

In summary, the findings in this thesis provide valuable information about the QOL during pregnancy. It provides profound foundations about the needs of healthy pregnant women and therefore, informs maternal nurse and midwife to develop proper nursing interventions and treatments in order to improve maternal health and QOL. Employing mixed method design help nurse researchers to explore the hidden features of any researchable issue that concerns QOL during pregnancy.

## **8. RECOMMENDATIONS**

This type of thesis adds a new nursing research model of inquiry. The first quantitative study was not enough to explore all QOL related factors during pregnancy. Therefore, it is followed by employing a qualitative approach of inquiry to get in depth understanding about the experience of healthy pregnant women from their perspectives. The findings revealed some suggestions and recommendations on nursing research, practice, education and policy.

For nurse researchers, longitudinal study is recommended to investigate QOL in all trimesters of pregnancy and make comparison between high parity women and low parity women in term of QOL. In addition, it is required to investigate the prevalence of pregnancy related discomforts and daily life events and its impact on the QOL with consideration of parity factor. It's beneficial if nurse researcher identify the effective coping strategies that could be used by women during pregnancy and have a positive impact on their QOL. Nurse researcher can examine the potential effect some social support promotion program or intervention on woman QOL during pregnancy.

In nursing practice, nurses should be aware of the significant effect of parity factor on women health and QOL. Nurses should obtain complete history of high parity women; listen to her feelings, problems, and any challenges during this pregnancy. Furthermore, it is recommended to perform continual assessment of QOL for high parity women in each antenatal visit. This assessment could help the nurses to design appropriate interventions and care such as creating referral services and home visit follow up. These interventions may promote women's health and enhance their QOL during pregnancy.

Nurses should assess the pregnancy related discomforts during antenatal visit and provide the proper treatment accordingly. Nurses also should assess and manage women's stressors during pregnancy such as provide referral resources for women

who have violence (such as mental and psychological clinic), and women who have low income (health organization that provide free treatment). It is recommended to assess the social sources and network for high parity women. Nurse and midwife should encourage the husband and family to participate in antenatal visits and activate their role in social support interventions.

Nurses can provide care for women with low QOL by developing home visit program. During home visit, it is recommended to assess the social sources and network for high parity women. Identifying high parity women with lack social support may help in designing early intervention, and provide suggestions for available social resources. Nurses can educate pregnant women about the benefits of strong social networks and support. Nurse can engage husband and other family members in all nursing interventions that may carried out during home visit.

Also, during home visit, nurses can increase women awareness about importance of performing antenatal care, especially for those who have late or no antenatal care utilization. In antenatal care settings, nurse should remind the pregnant women about the importance of coming to next visit and explained to them the required medical and nursing interventions that will received in that visit. Nurse as leader and advocate could develop policy in each antenatal care setting to remind pregnant women about her antenatal checkup by making phone call or message before the appointment of one day.

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## 10. ENCLOSURES

### Enc. 1: Socio-demographic and Obstetric questionnaire

#### 1. Age

- ≤ 19 years old
- 20 – 25
- 26 – 30
- 31 – 35
- ≥ 36 or more.

#### 2. Educational level

- Primary school   -Secondary school   -College diploma   -Bachelor degree
- Master or doctoral degree

#### 3. Occupation

- House wife                      -Part time worker                      -Full time worker

#### 4. If you work, what is your job? \_\_\_\_\_

#### 5. Family total monthly income

- Less than JD 450      - From JD 450 to JD 800                      -More than JD 800

#### Obstetric characteristics

#### 6. How many living children you have?

- Non      -1      -2      -3      -four or more

#### 7. What is the number of previous pregnancies?

- Non                      -One                      - two or mo

#### 8. Gestational age:

- The third month      -the fourth month      -The fifth month                      -the sixth month
- The seventh month      -The eighth month                      -the ninth month

#### 9. Did you plan this pregnancy                      - Yes.                      -No.

## Enc. 2: RAND SF-36



RAND > RAND Health > Surveys > RAND Medical Outcomes Study > 36-Item Short Form Survey (SF-36) >

### 36-Item Short Form Survey Instrument (SF-36)

#### RAND 36-Item Health Survey 1.0 Questionnaire Items

Choose one option for each questionnaire item.

1. In general, would you say your health is:

- 1 - Excellent
- 2 - Very good
- 3 - Good
- 4 - Fair
- 5 - Poor

2. Compared to one year ago, how would you rate your health in general now?

- 1 - Much better now than one year ago
- 2 - Somewhat better now than one year ago
- 3 - About the same
- 4 - Somewhat worse now than one year ago
- 5 - Much worse now than one year ago

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	Yes	No
13. Cut down the amount of time you spent on work or other activities	<input type="radio"/> 1	<input type="radio"/> 2
14. Accomplished less than you would like	<input type="radio"/> 1	<input type="radio"/> 2
15. Were limited in the kind of work or other activities	<input type="radio"/> 1	<input type="radio"/> 2
16. Had difficulty performing the work or other activities (for example, it took extra effort)	<input type="radio"/> 1	<input type="radio"/> 2

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	Yes	No
17. Cut down the amount of time you spent on work or other activities	<input type="radio"/> 1	<input type="radio"/> 2
18. Accomplished less than you would like	<input type="radio"/> 1	<input type="radio"/> 2
19. Didn't do work or other activities as carefully as usual	<input type="radio"/> 1	<input type="radio"/> 2

20. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

- 1 - Not at all
- 2 - Slightly
- 3 - Moderately
- 4 - Quite a bit
- 5 - Extremely

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
3. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
4. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
5. Lifting or carrying groceries	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
6. Climbing several flights of stairs	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
7. Climbing one flight of stairs	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
8. Bending, kneeling, or stooping	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
9. Walking more than a mile	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
10. Walking several blocks	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
11. Walking one block	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
12. Bathing or dressing yourself	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3

21. How much bodily pain have you had during the past 4 weeks?

- 1 - None
- 2 - Very mild
- 3 - Mild
- 4 - Moderate
- 5 - Severe
- 6 - Very severe

22. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

- 1 - Not at all
- 2 - A little bit
- 3 - Moderately
- 4 - Quite a bit
- 5 - Extremely



These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks...

	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
23. Did you feel full of pep?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
24. Have you been a very nervous person?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
25. Have you felt so down in the dumps that nothing could cheer you up?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
26. Have you felt calm and peaceful?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
27. Did you have a lot of energy?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
28. Have you felt downhearted and blue?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
29. Did you feel worn out?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
30. Have you been a happy person?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
31. Did you feel tired?	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6

32. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc)?

- 1 - All of the time  
 2 - Most of the time  
 3 - Some of the time  
 4 - A little of the time  
 5 - None of the time

How TRUE or FALSE is each of the following statements for you.

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
33. I seem to get sick a little easier than other people	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
34. I am as healthy as anybody I know	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
35. I expect my health to get worse	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
36. My health is excellent	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

#### ABOUT

The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

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## Enc. 3: Arabic RAND SF-36

- 1 -

### الاستبيان صحح

الجنس  ذكر

أنثى

العمر \_\_\_\_\_ سنة

- المهول الطبي:  ابتدائي  
 اعدادي  
 ثانوي  
 بكالوريوس  
 ماجستير  
 دكتوراه

من فضلك، أجب على كل الأسئلة الموجودة في هذا الاستبيان. في حالة عدم وضوح أي سؤال، أرجو اختيار أقرب اجابة لمفهوك للسؤال.

١- بصورة عامة، كيف ترى حالتك الصحية؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ممتازة  
 جيد جداً  
 جيدة  
 لا بأس بها  
 سيئة

٢- مقارنة بعام مضى، كيف تقيم حالتك الصحية الآن بصورة عامة؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- أفضل بكثير مما كانت عليه قبل عام  
 أفضل نوعاً ما من العام الماضي  
 تقريباً طم ما هي عليه  
 أسوأ نوعاً ما من العام الماضي  
 أسوأ بكثير مما كانت عليه قبل عام

- 2 -

٣- تتعلق البنود التالية بالنشطة يمكن أن تقوم بها خلال يومك العادي. في الوقت العادي، إلى أي مدى تفيدك حالتك الصحية؟

لا تفيدني إطلاقاً	تفيدني قليلاً	تفيدني كثيراً	لا تتعلق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(أ) من ممارسة الأنشطة الشاقة مثل: حمل الأشياء الثقيلة أو موازنة الأنشطة الرياضية الشاقة جداً؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(ب) من ممارسة الأنشطة متوسطة الجهد، كتحريك العازلة أو التنظيف باستخدام المنسدة الكهربائية أو تنظيف حديقة المنزل والعناية بها؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(ج) من حمل المشتريات من البقالة أو السوق المركزي (للمتسوقين)؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(د) من صعود الدرج لعدة أرواق؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(هـ) من صعود الدرج لعدد واحد فقط؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(و) من التخطأ أو الزكوع أو السجود؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(ز) من المشي لأكثر من كيلومتر ونصف؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(ح) من المشي لساعة نصف كيلومتر؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(ط) من المشي لساعة مئة متر؟
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(ي) من الاستحمام أو ارتداء الملابس بنفسك؟

الصحة الجسمية

1- تتعلق اليوم التالية ( أ ، ب ، ج ، د ) بالمشاكل التي يمكن أن تواجهك خلال تدريبك لعمك أو للأنشطة اليومية المعتادة نتيجة لحالتك الصحية الجسمية، خلال الأسابيع الأربعة الماضية، عل نسبت حالتك الصحية الجسمية في

(يرجى اختيار واحد فقط) ✓ عدم اهتماماً

لا	نعم	
<input type="checkbox"/>	<input type="checkbox"/>	(أ) التقليل من الوقت الذي تقضيه في العمل أو أي أنشطة أخرى؟
<input type="checkbox"/>	<input type="checkbox"/>	(ب) التقليل مما تود إنجازه من العمل أو أي أنشطة أخرى؟
<input type="checkbox"/>	<input type="checkbox"/>	(ج) تنفيذك في أداء نوع معين من الأعمال أو أي أنشطة أخرى؟
<input type="checkbox"/>	<input type="checkbox"/>	(د) أن تجد صعوبة في تلبية العمل أو أي أنشطة أخرى؟ (على سبيل المثال، اخذت إلى جهد إضافي لتأجيلها)

الصحة النفسية

2- تتعلق اليوم التالية ( أ ، ب ، ج ، د ) بالمشاكل التي يمكن أن تواجهك خلال تدريبك لعمك أو للأنشطة اليومية المعتادة كنتيجة لحالتك الصحية النفسية، خلال الأسابيع الأربعة الماضية، عل نسبت حالتك الصحية النفسية في

(يرجى اختيار واحد فقط) ✓ عدم اهتماماً

لا	نعم	
<input type="checkbox"/>	<input type="checkbox"/>	(أ) التقليل من الوقت الذي تقضيه في العمل أو أي أنشطة أخرى؟
<input type="checkbox"/>	<input type="checkbox"/>	(ب) التقليل مما تود إنجازه من العمل أو أي أنشطة أخرى؟
<input type="checkbox"/>	<input type="checkbox"/>	(ج) عدم إنجاز العمل أو أي أنشطة أخرى والعرض المعتاد؟

8- خلال الأسابيع الأربعة الماضية، إلى أي مدى أدى الألم الجسدي إلى التعارض مع تدريبك لأعضائك المعتادة (سواء داخل المنزل أو خارجه)؟

(أختر إجابة واحدة وضع علامة ✓ أمام الإجابة المناسبة)

- لم يكن هناك أي تعارض
- كان هناك تعارض قليل جداً
- كان هناك تعارض متوسط
- كان هناك تعارض كبير
- كان هناك تعارض كبير جداً

الصحة الجسمية أو النفسية

6- خلال الأسابيع الأربعة الماضية، إلى أي مدى تعارضت صحتك الجسمية أو النفسية مع تدريبك لتساعداك الإجتماعية المعتادة مع عائلتك أو أصدقائك أو جيرانك أو أي من المناسبات الإجتماعية الأخرى؟

(أختر إجابة واحدة وضع علامة ✓ أمام الإجابة المناسبة)

- لم يكن هناك أي تعارض إطلاقاً
- كان هناك تعارض قليل
- كان هناك تعارض متوسط
- كان هناك تعارض كبير
- كان هناك تعارض كبير جداً

شدة الألم

7- ما شدة الألم الجسدي الذي عانيت منه خلال الأسابيع الأربعة الماضية؟

(أختر إجابة واحدة وضع علامة ✓ أمام الإجابة المناسبة)

- لم يكن هناك أي ألم
- كان هناك ألم خفيف جداً
- كان هناك ألم خفيف
- كان هناك ألم متوسط
- كان هناك ألم شديد
- كان هناك ألم شديد جداً

9- الأنشطة التالية تتعلق بكيفية شعورك وطبيعة سير الأمور معك خلال الأسابيع الأربعة الماضية، الرجاء إعطاء إجابة واحدة لكل سؤال بحيث تكون هذه الإجابة هي الأقرب إلى الحالة التي كنت تشعر بها، خلال الأسابيع الأربعة الماضية، كم من الوقت:

	في كل الأوقات	في معظم الأوقات	في كثير من الأوقات	في بعض الأوقات	في قليل من الأوقات	أو لم يحدث من الأوقات
(أ) شعرت أنك ملل بالحيوية والنشاط؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ب) كنت شخصاً عصبياً جداً؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ج) شعرت أنك في حالة اكتئاب إلى درجة لم يكن معها أمثال السرور اليق؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(د) شعرت بالهذون والظلمانية؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(هـ) كانت لديك طاقة كبيرة؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(و) شعرت بالاحباط واليأس؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ز) شعرت أنك منهك (استنفوت قواك)؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ح) شعرت أنك شخص سعيد؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ط) شعرت أنك تعبان؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

١٠- خلال الاسبوع الاربعة الماضية، ما مقدار الوقت الذي تمارضت فيه صحتك الجسمية او مشاكلك النفسية مع نشاطاتك الاجتماعية ( مثل زيارة الأصدقاء والأقارب وغير ذلك ) ؟

(أختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- كان التعارض في كل الأوقات  
 كان التعارض في معظم الأوقات  
 كان التعارض في بعض الأوقات  
 كان التعارض في قليل من الأوقات  
 لم يكن هناك تعارض في أي وقت من الأوقات

١١- ما مدى صحة أو خطأ كل من العبارات التالية ( أ ، ب ، ج ، د ) بالنسبة إلى حالتك الصحية؟				
صحيحة بلا شك	صحيحة غالباً	لا أعلم	خطأ غالباً	خطأ بلا شك
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*\*\*\*\* شكراً لتعاونكم \*\*\*\*\*

## Enc. 4: Permission to Use RAND SF-36

[RAND](#) > [RAND Health Care](#) > [Surveys](#) > [RAND Medical Outcomes Study](#) > [36-Item Short Form Survey \(SF-36\)](#) >

### Terms and Conditions for Using the 36-Item Short Form Survey (SF-36)

RAND hereby grants permission to use RAND 36-Item Short Form Health Survey in accordance with the following conditions, which shall be assumed by all to have been agreed to as a consequence of accepting and using this document:

1. Changes to the Health Survey may be made without the written permission of RAND. However, all such changes shall be clearly identified as having been made by the recipient.
2. The user of this Health Survey accepts full responsibility, and agrees to indemnify and hold RAND harmless, for the accuracy of any translations of the Health Survey into another language and for any errors, omissions, misinterpretations, or consequences thereof.
3. The user of this Health Survey accepts full responsibility, and agrees to indemnify and hold RAND harmless, for any consequences resulting from the use of the Health Survey.
4. The user of the 36-Item Health Survey will provide a credit line when printing and distributing this document acknowledging that it was developed at RAND as part of the Medical Outcomes Study.
5. No further written permission is needed for use of this Health Survey.

Enc. 5: PSS

PERCEIVED STRESS SCALE

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

Name \_\_\_\_\_ Date \_\_\_\_\_

Age \_\_\_\_\_ Gender (Circle): M F Other \_\_\_\_\_

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

- |                                                                                                                      |   |   |   |   |   |
|----------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1. In the last month, how often have you been upset because of something that happened unexpectedly?                 | 0 | 1 | 2 | 3 | 4 |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life?     | 0 | 1 | 2 | 3 | 4 |
| 3. In the last month, how often have you felt nervous and "stressed"?                                                | 0 | 1 | 2 | 3 | 4 |
| 4. In the last month, how often have you felt confident about your ability to handle your personal problems?         | 0 | 1 | 2 | 3 | 4 |
| 5. In the last month, how often have you felt that things were going your way?                                       | 0 | 1 | 2 | 3 | 4 |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do?       | 0 | 1 | 2 | 3 | 4 |
| 7. In the last month, how often have you been able to control irritations in your life?                              | 0 | 1 | 2 | 3 | 4 |
| 8. In the last month, how often have you felt that you were on top of things?                                        | 0 | 1 | 2 | 3 | 4 |
| 9. In the last month, how often have you been angered because of things that were outside of your control?           | 0 | 1 | 2 | 3 | 4 |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | 0 | 1 | 2 | 3 | 4 |



## Enc. 6: مقياس الضغط النفسي المدرك

الأسئلة التالية تتعلق بمشاعرك وأفكارك خلال الشهر الماضي.

مقابل كل فقرة ضع إشارة لعدد المرات التي شعرت وفكرت بها.

الرقم	الفقرة	أبداً	تقريباً أحياناً	أحياناً تقريباً	غالباً
1	خلال الشهر الماضي، كم مرة شعرت بالانزعاج بسبب شيء ما حدث بشكل غير متوقع				
2	خلال الشهر الماضي، كم مرة شعرت بأنك غير قادر على السيطرة على أشياء مهمة في حياتك				
3	خلال الشهر الماضي، كم مرة شعرت بأنك عصبي ومضغوط نفسياً				
4	خلال الشهر الماضي، كم مرة شعرت بأنك تثق بقدرتك على حل مشاكلك الخاصة				
5	خلال الشهر الماضي، كم مرة شعرت بأن الأمور تسير على حسب ما تريد				
6	خلال الشهر الماضي، كم مرة وجدت أنك غير قادر على التكيف مع كل الأشياء المطلوب منك إنجازها				
7	خلال الشهر الماضي، كم مرة كنت قادراً على السيطرة على أشياء تنرفزك في حياتك				
8	خلال الشهر الماضي، كم مرة شعرت بأنك متمكن من الأشياء حولك				
9	خلال الشهر الماضي، كم مرة غضبت بسبب أشياء خارجة عن إرادتك				
10	خلال الشهر الماضي، كم مرة شعرت بأن المصاعب تزداد وأنك لا تستطيع التغلب عليها				

## Enc. 7: Permission to Use PSS

---

### PERMISSION FOR USE OF THE PERCEIVED STRESS SCALE

I apologize for this automated reply. Thank you for your interest in our work.

**PERMISSION FOR USE BY STUDENTS AND NONPROFIT ORGANIZATIONS:** If you are a student, a teacher, or are otherwise using the Perceived Stress Scale (PSS) without making a profit on its use, you have my permission to use the PSS in your work. Note that this is the only approval letter you will get. I will not be sending a follow-up letter or email specifically authorizing you (by name) to use the scale.

**PERMISSION "FOR PROFIT" USE:** If you wish to use the PSS for a purpose other than teaching or not for profit research, or you plan on charging clients for use of the scale, you will need to see the next page: "Instructions for permission for profit related use of the Perceived Stress Scale".

**QUESTIONS ABOUT THE SCALE:** Information concerning the PSS can be found at <https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/index.html> (**click on scales on the front page**). Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales. Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

**TRANSLATIONS:** The website (see URL above) also includes copies of translations of the PSS into multiple languages. These translations were done *by other investigators*, not by our lab, and we take no responsibility for their psychometric properties. If you translate the scale and would like to have the translation posted on our website, please send us a copy of the scale with information regarding its validation, and references to relevant publications. If resources are available to us, we will do our best to post it so others may access it.

Good luck with your work.




Sheldon Cohen  
Robert E. Doherty University Professor of Psychology  
Department of Psychology  
Baker Hall 335-D  
Carnegie Mellon University  
Pittsburgh, PA 15213

## Continue Enc. 7

← Back ↶ ↷ → Archive Move Delete Spam ...

• permission to use Arabic version of PSS 5 Yahoo/Inbox

 **ghadeer Alzboon** <galzboon@yahoo.com> Dec 25, 2017 at 12:05 AM  
To: a.mansour@ju.edu.jo

Hello,  
I am nursing PhD student and I want to use perceived stress scale in my thesis and in one manuscript. my sample is Jordanian pregnant women. Please, can you told me from whom should I get permission to use the Arabic version of this scale.

Looking forward to hearing from you.

Ghadeer Alzboon  
Nursing Phd student  
Near East University

↶ ↷ → ...

← Back ↶ ↷ → Archive Move Delete Spam ...

 **Ayman Mansour** <a.mansour@ju.edu.jo> Dec 25, 2017 at 8:35 AM ★  
To: ghadeer Alzboon

you have the permission although I think using the psychological distress scale (ATTACHED) that measures general stress is more appropriate. you know better of course.  
good luck

**Ayman M. Hamdan-Mansour RN, MSN, PhD**

Professor, Psychiatric Mental Health Nursing

School of Nursing-The University of Jordan

E-Mail: a.mansour@ju.edu.jo

Mobile Number: ++962796383002

Website: <http://eacademic.ju.edu.jo/a.mansour>

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**Enc. 8: Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)**

**Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)**

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the "1" if you Very Strongly Disagree  
 Circle the "2" if you Strongly Disagree  
 Circle the "3" if you Mildly Disagree  
 Circle the "4" if you are Neutral  
 Circle the "5" if you Mildly Agree  
 Circle the "6" if you Strongly Agree  
 Circle the "7" if you Very Strongly Agree

1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7	SO
2.	There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	SO
3.	My family really tries to help me.	1	2	3	4	5	6	7	Fam
4.	I get the emotional help and support I need from my family.	1	2	3	4	5	6	7	Fam
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7	SO
6.	My friends really try to help me.	1	2	3	4	5	6	7	Fri
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7	Fri
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7	Fam
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	Fri
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7	SO
11.	My family is willing to help me make decisions.	1	2	3	4	5	6	7	Fam
12.	I can talk about my problems with my friends.	1	2	3	4	5	6	7	Fri

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri) or significant other (SO).

## Enc. 9: Arabic version of Multidimensional Scale of Perceived Social

### Support

#### مقياس الدعم الاجتماعي

الرجاء قراءة العبارات التالية وتحديد إلى أي حد توافق من خلال اختيار الأرقام التالية بوضع إشارة (√)

أوافق بشدة	العبارة					أعارض بشدة	العبارة	
	أوافق	أوافق نسبياً	محايد	أعارض نسبياً	أعارض			
7	6	5	4	3	2	1	إن هناك شخص معين يكون بجانبني عند الحاجة	1
7	6	5	4	3	2	1	إن هناك شخص معين أستطيع أن أشاركه أفراحي وأحزاني	2
7	6	5	4	3	2	1	إن عائلتي تحاول أن تساعدني	3
7	6	5	4	3	2	1	أحصل على الدعم العاطفي و المساعدة التي أحتاجها من عائلتي	4
7	6	5	4	3	2	1	أنا يوجد عندي شخص معين يعتبر المصدر الأساسي لتقديم الراحة لي	5
7	6	5	4	3	2	1	أصدقائي يحاولون تقديم المساعدة لي	6
7	6	5	4	3	2	1	أنا ارتكز و الجأ إلى أصدقائي عند حدوث مشاكل	7
7	6	5	4	3	2	1	أستطيع التحدث عن مشاكلي مع عائلتي	8
7	6	5	4	3	2	1	لدي أصدقاء أستطيع أن أشاركه أفراحي و أحزاني	9
7	6	5	4	3	2	1	إن هناك شخص معين في حياتي يهتم بمشاعري	10
7	6	5	4	3	2	1	عائلتي لديها الاستعداد لمساعدتي في اتخاذ قراراتي	11
7	6	5	4	3	2	1	أستطيع التحدث عن مشاكلي مع أصدقائي	12

## Enc. 10: Permission to Use MSPSS

This site was designed with the **WIX**.com website builder. Create your website today.

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The Multidimensional Scale of Perceived Social Support (MSPSS) is a brief research tool designed to measure perceptions of support from 3 sources: Family, Friends, and a Significant Other. The scale is comprised of a total of 12 items, with 4 items for each subscale. My colleagues, Nancy Dahlem, Sara Zimet, Gordon Farley, and I (Gregory Zimet) first published on the MSPSS in the Journal of Personality Assessment in 1988.

Across many studies, the MSPSS has been shown to have good internal and test-retest reliability, good validity, and a fairly stable factorial structure. It has been translated into many languages, including (but not limited to) Urdu, Hebrew, Tamil, Danish, Farsi (Persian), French, Italian, Korean, Lithuanian, Hausa, Norwegian, Simplified Chinese, Traditional Chinese, Slovene, Malay, Slovak, Spanish, Swedish, Polish, Portuguese, Romanian, and Thai. For linguistically-validated translations, consider using [TransPerfect](#).

The MSPSS is free to use. Please simply credit the following paper (and any others that are relevant), if you use the scale:

Zimet GD, Dahlem NW, Zimet SG, Farley GK. The Multidimensional Scale of Perceived Social Support. Journal of Personality Assessment 1988;52:30-41.

 [MSPSS.pdf](#)



**ghadeer Alzboon** <galzboon@yahoo.com>  
To: d.yehia@zuj.edu.jo

 Jan 13, 2018 at 3:48 PM 

Alsalam alaikum,

I am Nursing PhD student and I want to use multidimensional perceived social support scale (MPSSS). you used it in your study: **Prevalence and Predictors of Postpartum Depression Among Arabic Muslim Jordanian Women Serving in the Military.**


Please, can you send the Arabic version that you used in your studies? and

can you give me a permission to use the Arabic version?.

Ghadeer Alzboon



## Continue Enc. 10

 **ghadeer Alzboon** Alsalam alaikum, I am Nursing PhD student and I want to use multidimensior Jan 13, 2018 at 3:48 PM ★

 **Dalal Yehia** <d.yehia@zuj.edu.jo> Jan 15, 2018 at 10:23 AM ★  
To: 'ghadeer Alzboon'

Dear,

Good morning. Thank you for requesting the tool. I'll pass it to you this week. Be informed to do citation of my name about the tool.




Regards

> [Show original message](#)

← Back   →  Archive  Move  Delete  Spam ...

• social support scale MPSSS 3

 **ghadeer Alzboon** Alsalam alaikum, I am Nursing PhD student and I want to use multidimensio

 **shaher29 Shaher** <shaher29@hu.edu.jo>    
To: ghadeer Alzboon

Dear Ghadeer Alzboon,

This is the Arabic version of multidimensional perceived social support scale (MPSSS).  
You have the permission to use the Arabic version in your Doctoral thesis.  
Good Luck

> [Show original message](#)

--  
Shaher H Hamaideh, PhD, RN  
Associate Prof. of Mental Health Nursing  
College of Nursing/The Hashemite University  
Zarka, Jordan.

## Enc. 11: Ethical approval from Jordanian Ministry of Health

  
مملكة الأردن  
الجمهورية الهاشمية

الرقم  
التاريخ  
الموافق

CODE : MOH REC 180014

**قرار لجنة أخلاقيات البحث العلمي**

اجتمعت لجنة أخلاقيات البحث العلمي بتاريخ ٢٥ / ١ / ٢٠١٨ لمناقشة ودراسة البحث العلمي المقدم من قبل طالبة الدكتوراه/ غدير علي خلف الزبون. بعنوان :

**\*العوامل المؤثرة على جودة الحياة لدى الحوامل الصحيحات في شمال الاردن\***  
وقد قررت اللجنة بالاجماع موافقه على اجراء البحث المشار اليه اعلاه.  
وعليه تم التوقيع من قبل اعضاء اللجنة حسب الاصول .


عضو اللجنة رئيس قسم الاشعة العلاجية الدكتور / رسمي مبيضين	عضو اللجنة رئيس قسم الجلخاحة العامة الدكتور / فايز الخمود	عضو اللجنة المساعد لشؤون التمريض الدكتور / هاني الفضاة
عضو اللجنة رئيس قسم النسائية والتوليد الدكتور / عبد اللمتاع السليمان	عضو اللجنة رئيس قسم الباطني الدكتور / عباس منصور	عضو اللجنة رئيس قسم الاطفال الدكتور / ياسمه مرار

رئيس اللجنة  
مدير مستشفى البشير  
الدكتور/عمار نعيم الشرفا

الملكة الأردنية الهاشمية  
www.moh.gov.jo الموقع الإلكتروني ١١٦١٨ عمان الأردن ٢٠١٢ ٠٦٦٦ ٦٥٢١٢٣ فاكس ٠٦٦٦ ٦٥٢١٢٣

## Enc. 12: Ethical approval from IRB of Near East University




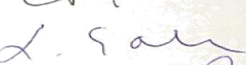
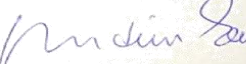
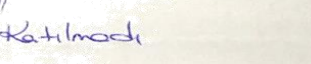
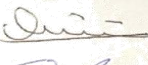

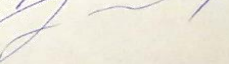
EK:628-2018

  
**YAKIN DOĞU ÜNİVERSİTESİ**  
BİLİMSEL ARAŞTIRMALAR DEĞERLENDİRME ETİK KURULU

**ARAŞTIRMA PROJESİ DEĞERLENDİRME RAPORU**

**Toplantı Tarihi** : 29.03.2018  
**Toplantı No** : 2018/56  
**Proje No** : 538

Yakın Doğu Üniversitesi Hemşirelik Fakültesi öğretim üyelerinden Prof. Dr. Gülşen Vural'ın sorumlu araştırmacısı olduğu, YDU/2018/56-538 proje numaralı ve "**Factors Influencing the Quality of Life of Healthy Pregnant Women in North of Jordan**" başlıklı proje önerisi kurulumuzca değerlendirilmiş olup, etik olarak uygun bulunmuştur.

1. Prof. Dr. Rüşü Onur	(BAŞKAN)	
2. Prof. Dr. Nerin Bahçeciler Önder	(ÜYE)	
3. Prof. Dr. Tamer Yılmaz	(ÜYE)	
4. Prof. Dr. Şahan Saygı	(ÜYE)	
5. Prof. Dr. Şanda Çalı	(ÜYE)	
6. Prof. Dr. Nedim Çakır	(ÜYE)	
7. Prof. Dr. Kaan Erler	(ÜYE)	Katılmadı
8. Doç. Dr. Ümran Dal Yılmaz	(ÜYE)	
9. Doç. Dr. Nilüfer Galip Çelik	(ÜYE)	
10. Yrd. Doç.Dr. Emil Mammadov	(ÜYE)	

### **Enc. 13: Informed Consent Form for Participants**

You are invited to participate in a research study conducted by Ghadeer Alzboon and Gulşen Vural, from the NEAR EAST UNIVERSITY, Faculty of Nursing. I have learned that pregnancy has normal physiologic and psychological changes in women body that may affect their quality of life. Therefore, the aim of the study is to identify the most factors affecting the quality of life among healthy pregnant women in Irbid city in Jordan and to examine the differences in the quality of life according to their demographic- obstetric factors, perceived stress, and perceived social support of pregnant women. You were selected as a possible participant in this study because you are pregnant and met the inclusion criteria of study. If you decide to participate, you will sign the consent form then fill the paper format of survey in the private room in this health care setting. This will be carried out during this visit and will take 20- 25 minutes. No any anticipated risks or harms from participating in this study. You will fill the survey in quit and private room during the waiting period in the clinic or health center. Also, there are no direct benefits from participating in this research, but the findings that will be gained from this study may be beneficial to the others and help in improving the quality of life of pregnant women. However, I cannot guarantee that you personally will receive any benefits from this research. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Subject identities will be kept confidential by separating the consent form from the questionnaire and kept them in isolated envelop to ensure privacy and confidentiality of data. Coding will be given for personal identification information of women. All the collected data (in paper format) will be stored in a secure and locked cabinet in the principal investigator's home. The electronic data will be stored in a secured computer with password. Only the principal investigator and the advisor have access to the written and electronic data. Both type of data are coded and not have any type of participant's identification information. Your participation is voluntary. Your decision whether or not to participate will not affect your relationship with this health care setting. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty. If you have any questions about the study, please feel free to contact me:

**Ghadeer Alzboon**

**Phone number: 0772047355**

**e-mail: [galzboon@yahoo.com](mailto:galzboon@yahoo.com)**

**Address: An naimeh- Irbid - Jordan**

**Or my Advisor:**

**Prof. Dr. Gulşen Vural, phone #: 90 0 533 363 56 04**

If you have questions regarding your rights as a research subject, please contact the NEAR EAST INSTITUTIONAL REVIEW BOARD. You will be offered a copy of this form to keep. Your signature indicates that you have read and understand the information provided above, that you willingly agree to participate, that you may withdraw your consent at any time and discontinue participation without penalty, that you will receive a copy of this form, and that you are not waiving any legal claims.

**Participant**

Name, Surname:

Address:

Phone:

Signature:



## **Enc. 14: Information Sheet and Consent Form of Step 2**

### **Letter of Information (for Potential Participants)**

#### **The experience of healthy pregnancy in high parity women. A phenomenological study in north Jordan.**

You are being invited to take part in this study. It is being conducted by Doctorate nursing student, at the Near East University in North Cyprus. This letter will provide adequate information about the study details. This will help you to take decision regarding participation in this study.

Please do not hesitate to ask, if you have any questions. Take your time to read the letter and to decide whether or not you want to take part.

#### **Description of the Study**

The purpose of this study is to provide in depth understanding of the experience of healthy pregnancy of high parity women in Jordan. You will provide your descriptions, and stories of being pregnant while having four children and more. This will be done by conducting face to face interview with you for more than one time. By conducting the interview, I hope to achieve the following:

- To understand of personal experience of being pregnant while having four or more children.
- To explore the experience of high parity women in taking care of children and household duties during pregnancy in Irbid city in Jordan.
- To explore women's feelings and thoughts of taking care of children during pregnancy.
- To explore husband roles on taking care of children during pregnancy.
- To get knowledge about the needs of high parity women in pregnancy.

#### **Inclusion Criteria**

In order to be eligible to participate in this study, the following is required of you:

- Jordanian nationality women.
- Married women.
- Having four children or more.
- Reading and writing Arabic language.
- Free from any previous or current obstetric health problems.

- Free from any previous or current systematic health problems (Diabetes mellitus, hypertension, etc.).
- Having single fetus and conceiving naturally.
- Non smokers' women.

**Examples of potential interview questions may include:**

**Primary research question**

What is the lived experience of pregnancy (which is considered healthy) in high parity women in Irbid city in Jordan?

**Sub-questions**

- What is your personal experience of being pregnant while having four children or more?
- What is your feelings of being pregnant and take care of four children or more?
- What is your thoughts of being pregnant and take care of four children or more?
- Describe your general health during pregnancy?
- What is your husband role during pregnancy toward house work duties?
- What is your husband role during pregnancy toward taking care of your children?
- What do you do when you face a problem with house work?
- How do you feel toward taking care of four or more children?
- How you take care of yourself during pregnancy?
- How you solve any health problem? Who support you?

**Procedure**

You will be participating in the interview because you met the inclusion criteria of this study. The interview will be started after you have consented to participate in the study. I will conduct the interview with you alone in a any private and comfortable place for you. The interview will take 30- 45 min. I will interview you again one week later to gain more information about your experience. The study will not involve additional cost for you.

### **Risks**

There are no any anticipated risks associated with participating in this study. If there is any possible risks threaten your health, I will stop the interview immediately.

### **Benefits**

By participating in this study, you will help the researcher in understand the meanings of being and having four children or more. Understanding the experiences of pregnant women of high parity will contribute in promoting their health and improve their quality of life.

### **Confidentiality**

By participating in this study, your confidentiality will be fully protected. All recorded and transcribed data will be stored in secure place that is only accessible to the research team. Your name and address will be removed and no anyone will recognize them. Your personal information will not used or published.

### **Voluntary Participation**

Your Participation in this study is voluntary. You can refuse participating or withdraw from the study any time. You do not waive any legal rights by signing the consent form.

If you have any questions, please direct them to the principal investigator or project supervisor:

**Ghadeer Alzboon**

**PhD Nursing Student**

**Faculty of Nursing**

**Near East University**

**OR**

**Gülşen VURAL** Associate Professor/ Advisor

[gulsen.vural@neu.edu.tr](mailto:gulsen.vural@neu.edu.tr)

+90 0 533 363 56 04

**Continue Enc. 14: Participant Consent Form**

**Title of study: The experience of healthy pregnancy in high parity women. A phenomenological study in north Jordan.**

**Name of Researcher: Ghadeer Alzboon**

I have read the Letter of Information and the nature of the study explained to me. I know that the participation is voluntary and I can withdraw any time. I agree to participate in this study. All questions have been fully answered to my satisfaction.

Name (Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Phone number: \_\_\_\_\_

Date: \_\_\_\_\_

Name of Person Responsible for Obtaining Informed Consent (Print):

\_\_\_\_\_

Signature of Person Responsible for Obtaining Informed Consent:

\_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

Signature \_\_\_\_\_

## 11. CURRICULUM VITAE

<b>Name</b>	GHADEER	<b>Surname</b>	ALZBOON
<b>PLACE OF BIRTH</b>	AN NAIMEH	<b>Date of Birth</b>	20.06.1978
<b>Nationality</b>	JORDAN	<b>Tel</b>	+962772074355 +0533 8499530
<b>E-mail</b>	galzboon@yahoo.com		

### Educational Level

<b>Degree</b>	<b>Name of the Institution where he/she was graduated</b>	<b>Graduation year</b>
<b>Master</b>	Jordan University of science and Technology/ Maternal Newborn Nursing	2006
<b>Undergraduate</b>	Jordan University of science and Technology/ Nursing	2002
<b>High school</b>	Irbid school/scientific field	1998

### Job Experience

<b>Duty</b>	<b>Institution</b>	<b>Duration (Year - Year)</b>
Maternal nurse	King Abdulla University Hospital	2002- 2008
Lecturer	Irbid National University.	2008- 2010
Focal point in Princess Rahma and Princess Badia' Hospital.	Jordan Health Aid Society	2012- 2014
Maternal nurse	Doctors without Borders/ MSF	2014- 2017

<b>Foreign Languages</b>	<b>Reading comprehension</b>	<b>Speaking*</b>	<b>Writing*</b>
English	good	good	good

<b>Foreign Language Examination Grade</b>								
<b>YDS</b>	<b>ÜDS</b>	<b>IELTS</b>	<b>TOEFL IBT</b>	<b>TOEFL PBT</b>	<b>TOEFL CBT</b>	<b>FCE</b>	<b>CAE</b>	<b>CPE</b>
			99					

### Computer Knowledge

<b>Program</b>	<b>Use proficiency</b>
Microsoft word, PowerPoint, Excel, SPSS	Good

## Publication

Alzboon, G & Vural, G. Factors influencing quality of life of healthy pregnant women in north Jordan. *Medicina*. 2019;55 (6): 278.

Journal List > Medicina (Kaunas) > v.55(6); 2019 Jun > PMC6631935



medicina



*Medicina (Kaunas)*. 2019 Jun; 55(6): 278.

PMCID: PMC6631935

Published online 2019 Jun 15. doi: [10.3390/medicina55060278](https://doi.org/10.3390/medicina55060278)

PMID: [31208100](https://pubmed.ncbi.nlm.nih.gov/31208100/)

### Factors Influencing the Quality of Life of Healthy Pregnant Women in North Jordan

[Ghadeer Alzboon\\*](#) and [Gülşen Vural](#)

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#### Abstract

Go to:

*Background and Objectives:* Quality of life (QOL) assessment during pregnancy contributes to determining women's unmet needs and preventing negative health outcomes. In this study, we aimed to identify the effects of participants' characteristics, perceived stress, and perceived social support on their QOL. We also aimed to determine the differences in QOL according to these factors. *Materials and Methods:* A cross-sectional study was carried out in a city in Jordan. Purposive sampling was used to select 218 participants. Data was collected by the quality of life Short Form- 36(SF-36) survey, perceived stress scale (PSS), and The Multidimensional perceived Social Support Scale (MSPSS). *Results:* We found that only parity had a significant effect on the QOL. High parity women had lower QOL scores than low parity women. The