



Pregnant women's attitude toward use of herbs, vitamins, and minerals supplement in Saudi Arabia

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Abstract

Aim: The objective of this cross-sectional study is to determine the prevalence, the pattern and the attitude toward the supplement of herbal remedies, vitamins and minerals among pregnant Saudi women living in different regions of Saudi Arabia.

Method: A cross sectional survey using a web-based questionnaire composed of 21 questions. The questionnaire focused on attitudes, pattern and prevalence toward the use of herbal remedies, vitamins and minerals during pregnancy period. The survey was conducted between 2nd Nov. to 23th Nov. 2019 and the study population was composed of 540 participants.

Result: 84.6% the participation of the women in the questionnaire was between 21 and 40 years old, 67.5% are graduated, 67.6% are from the central region and 40.7% are in the last trimester of pregnancy. Most ages between 21 and 40 are graduated from the central region showed positive effect of herbs, vitamins and minerals. The peppermint is the most common herb 24.3% that prepared during pregnancy while the majority of the participants 36.1% are taking nothing. The health care providers 30%, then the family and friends 28.3% are the most sources of recommendation of prepare herbs, vitamins and minerals.

Conclusion: This study concluded that the prevalence of herbs, vitamins and minerals supplement is considerably high among the graduated pregnant Saudi women from central region during pregnancy who have positive attitude is higher among respondents in our work. The majority of the women relied on informal sources to use herbal supplements during pregnancy while others relied on healthcare provider.

Keywords: Kingdom of Saudi Arabia, herbal, minerals, vitamins supplements, pregnancy, prevalence, pattern

1. Introduction

Herbal remedy has been widely utilized by pregnant women despite the limited available evidence-based regarding the safety and efficacy of that practice. Pregnant women have been widely recognized as a vulnerable group from health point of view. They need special diet differ than a normal person for the proper nourishment of the growing fetus. A healthy and diverse diet is an important always in life, but chiefly during pregnancy^[1]. The maternal diet must provide sufficient energy and nutrients to meet the mother's requirements, as well as the needs of the growing fetus. Maternal diet enables the mother to lay down stores of nutrients required for fetal development and lactation^[2]. The maternal diet recommendations are actually very similar to those for other adults, with a few notable exceptions. Based on the Balance of Good Health model the maternal diet should be a healthy and balanced diet. In particular, pregnant women should try to consume sufficient iron- and folat-rich foods, with a vitamin D throughout pregnancy^[3].

Many previous studies reported that herbal remedies are commonly used among pregnant women for self-remedy of many health conditions. On the other hand, many pregnant women believe that herbs are safer than conventional medicines^[4]. As we know that pregnancy is a dynamic state characterized by major changes to maternal physiology in order to accommodate the fetal and placental growth. Alterations in nutrient metabolism are the key to supporting the fetus as well as the mother^[5]. It is important that pregnant women have to maintain adequate levels of essential vitamins and minerals to maintain the cellular and metabolic activity

^[6]. Deficiencies in certain micronutrients, either through reduced dietary intake or impaired intestinal absorption or excretion, can have very bad consequences on pregnancy outcome^[7]. Micronutrient supplementation might reduce maternal hazards via preventing pregnancy health problems and lowering the risk of delivery complications^[8].

The worldwide trend is using the herbal remedies for preventing and treating health problems. A review of studies from the Western world, reported that the prevalence of herbal medicine use in pregnancy ranged from 1 to 60%^[9]. The prevalence rates were 34% in Australia, 58% in the UK, 40% in Norway, 48% in Italy and 6–9% in the US and Canada. In pregnancy, women often use herbal medicines due to the opinion that these substances are natural and safer to use as compared to pharmaceutical medicines^[10]. Researchers suggest that the use of herbal medicines speaks to a woman's wish to have greater choice in their health and aligns with their desire for a holistic approach to their well-being^[11].

A study evaluated 400 different women's knowledge about the indications for use of 10 specific herbal medicines (bearberry, dandelion, Echinacea, ginkgo, hops, horsetail, lemon balm, St. John's wort, sage, and valerian)^[12]. Despite this common awareness of safety, herbal medicines may have potent pharmacological actions, and have, in fact, been used for centuries, to promote abortion (emmenagogues)^[13]. Moreover, very little is known about the extent to which potentially harmful herbal medicines are used in pregnancy^[14]. Concerns range, with some herbal medicines, from teratogenicity to an increased risk of maternal bleeding or

impact on neonatal hormones due to the hormonal nature of the herbal medicine [15].

In pregnancy anemia has a significant impact on the health of the fetus as well as that of the mother. Anemia is common during the second and the third trimester of gestation. It has been attributed to increased iron requirements, as well as to micronutrient deficiency [16]. Malnourishment, frequent labor, multiparty, abortions, parasitic infestations, consuming excess tea or coffee after meals determined as the predictors of anemia in reproductive age women. Studies well indicated the association of anemia with maternal morbidity and mortality [17].

The aim of this study was to screening the prevalence, the patterns and the attitude toward the supplement of herbal remedies, vitamins and minerals among pregnant Saudi women living in different regions of Saudi Arabia.

2. Materials and Methods

2.1 Study design

A cross-sectional study was conducted to achieve our objectives. This study directed to Saudi Arabia populations. The participates in this study through an online questionnaire format in Arabic language that was uploaded on Google forms website, and was distributed on social media applications through collaboration with many friends and the duration of responses collection is 3 week (2 -23 Nov., 2019)

2.2 Participants and Eligibility Criteria

Participant sample size

The sample size participated in this study was 540 participates

Inclusion criteria: Adult pregnant Saudi women.

Exclusion criteria: Non-pregnant non-Saudi women

2.3 Questionnaire design

The questionnaire was mainly composed of four sections. Demographic data contain 4 questions, history current pregnancy status contain 10 questions, history of the attitudes and beliefs towards herbal remedies use and the most reliable sources of information for herbal medicine contain 3 questions and finally focused on woman's use of nonprescription herbal remedies during their pregnancy period contain 4 questions

2.4 Statistical Methods

The results were presented in the form of frequency, percentage. Chi-Square test crosses tabulation for relationship between variables was used. Statistical Software for using (Statistical Packages for Social Sciences [SPSS 24].

2.5 Data analysis

The software SPSS 24 used to analyze the collected data. Data were revised and coded and tabulated using the frequency and percentage, to analyze and interpret the results. Chi-square test was used to test the significance of the variables with $p < .05$

3. Results

457 out of 540 (84.6%) of participating women are between 21- 40-year-old, 365 (67.5%) are graduated, 366 (67.6%) are from the central region and 218 (40.7%) are in the last trimester of pregnancy (Table 1)

Table 2 shows that most ages between 21 and 40 are graduated from the central region in the 1st trimester of pregnancy showed positive effect toward herbs. (Figure1).

Around of 85% of women between 21-40-year-old which are graduated from the central region showed the positive attitude toward using vitamins (Table 3) while showed the positive effect of minerals (Table 4) in the last trimester of pregnancy

The peppermint 131 (24.3%) is the common herb that prepared during pregnancy and the majority 195 (36.1%) are taking nothing. (Table 5)

Table 1: Demographic data of the study subjects

		No. (%)
Age	< 20	13 (2.4%)
	21 - 40	457 (84.6%)
	> 40	70 (13%)
Educational Level	High School	134 (24.9%)
	Graduated	365 (67.5%)
	Post graduated	41 (7.6%)
Region	Central	366 (67.6%)
	Eastern	37 (6.9%)
	Western	76 (14.2%)
	Northern	33 (6.1%)
	Southern	28 (5.2%)
Trimester	First	172 (31.8%)
	Second	150 (27.5%)
	Last	218 (40.7%)

Table 2: Relation of herbs positive effect during pregnancy with demographic data

		Women with positive attitudes	All respondents	Chi-Square Value	P-Value
		No. (%)	No.		
Age	< 20	7 (53.8%)	13	3.019	0.221
	21- 40	146 (31.9%)	457		
	> 40	25 (35.7%)	70		
Educational Level	High School	43 (32.1%)	134	0.111	0.946
	Graduated	122 (33.4%)	365		
	Post graduated	13 (31.7%)	41		
Region	Central	120 (33%)	364	4.128	0.389
	Eastern	12 (32.4%)	37		
	Western	20 (26%)	77		
	Northern	15 (44.1%)	34		
	Southern	11 (39.3%)	28		
Trimester	First	66 (37.1%)	178	6.047	0.049
	Second	53 (37.1%)	143		
	Last	59 (26.9%)	219		

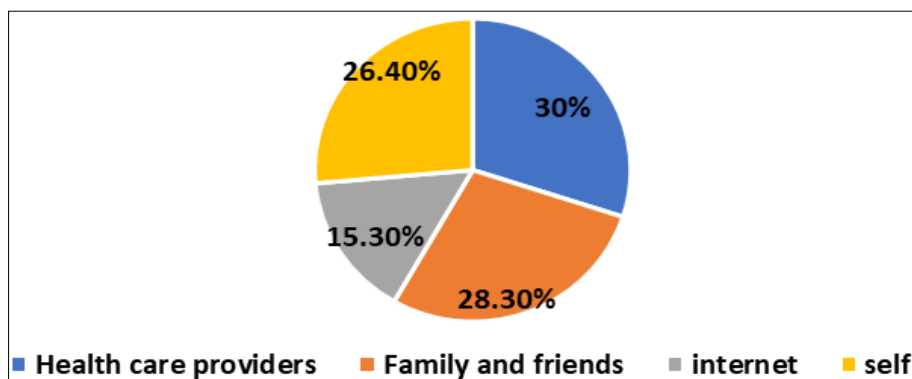


Fig 1: Sources of recommendation of herbs during pregnancy

Table 3: Relation of vitamins positive effect during pregnancy and demographic data

		Women with positive attitudes	All respondents	Chi-Square Value	P-Value
		No. (%)	No.		
Age	< 20	12 (92.3%)	13	1.223	0.542
	21– 40	397 (86.9%)	457		
	> 40	58 (82.9%)	70		
Educational Level	High School	106 (79.1%)	134	8.365	0.015
	Graduated	324 (88.8%)	365		
	Post graduated	37 (90.2%)	41		
Region	Central	315 (86.5%)	364	0.743	0.946
	Eastern	33 (89.2%)	37		
	Western	65 (84.4%)	77		
	Northern	29 (85.3%)	34		
	Southern	25 (89.3%)	28		
Trimester	First	150 (84.3%)	178	3.367	0.186
	Second	130 (90.9%)	143		
	Last	187 (85.4%)	219		

Table 4: Relation of minerals positive effect during pregnancy and demographic data

		Women with positive attitudes	All respondents	Chi-Square Value	P-Value
		No. (%)	No.		
Age	< 20	12 (92.3%)	13	0.414	0.813
	21– 40	395 (86.4%)	457		
	> 40	60 (85.7%)	70		
Educational Level	Secondary	105 (78.4%)	134	10.132	0.006
	Graduated	326 (89.3%)	365		
	Post graduate	36 (87.8%)	41		
Region	Central	313 (86%)	364	3.819	0.431
	Eastern	35 (94.6%)	37		
	Western	67 (87%)	77		
	Northern	27 (79.4%)	34		
	Southern	25 (89.3%)	28		
Trimester	First	151 (84.8%)	178	1.613	0.446
	Second	128 (89.5%)	143		
	Last	188 (85.8%)	219		

Table 5: Herbs that you prepare or use during pregnancy

Herbs	Mean percentage (%)	Standard deviation (%)
Anise	19	3.5
Mint	131	24.3
Ginger	59	10.9
Olive oil	28	5.2
Chamomile	13	2.4
Green tea	12	2.2
All options	66	12.2
Nothing	195	36.1
Others	17	3.1

4. Discussion

This study was carried out to screening the prevalence, patterns, and beliefs toward the use of herbal remedies, vitamins and minerals during pregnancy among pregnant Saudi women

In this study, the participants between 21 and 40-year-old which are graduated from the central region showed positive effect of herbal medicinal products in the 1st, 2nd and 3rd trimester of pregnancy by 37%, 37% and 26% respectively. Age, region and education level were the main factors significantly associated with use of herbal medicine

for various reasons. The Majority of the participants believe that the safety of herbal products. Herbal medicine products found to be popular among Saudi women, which could be as a result of a wide spread belief that they are natural, safe, and more effective than conventional medicine. These finding are agree with the previous Saudi Arabia and other developing countries studies [18]. Furthermore, the regulation, marketing and distribution of herbal products in Saudi market are deprived [19].

We think the reason for the increasing rate of using herbs remedies in developing countries is due to the lack of awareness about the risk associated with the use of herbs and due to its cheapest price compared to the convectional medicines, and they are easily accessible to people of various conditions.

During pregnancy there are numerous physiologic changes resulting in a variety of conditions including morning sickness (70%), insomnia (66%–94%), heartburn (30–50%), constipation (11%–38%), ankle edema (12%), anemia (14%–52% in Last trimester), and urinary tract infection (1%–13%), among others [20].

Herbal remedies were found to be used by the most of the participants. Licensed over-the-counter medicines are only available for a limited number of conditions associated with pregnancy, and this may be one factor that leads women to choose alternative remedies [21]. It is suggested that concerns by women regarding use of pharmaceutical in pregnancy can make people more interested in seeking perceived safer alternatives such as herbal remedies [22].

Our study showed that the mint 131 (24.3%) is the common herb that prepared during pregnancy while the majority 195 (36.1%) are taking nothing.

Screening study cleared that the most commonly used herbs during pregnancy are ginger, cranberry, valerian, raspberry leaf, chamomile, peppermint, thyme, fenugreek, green tea, sage, anise, garlic and bitter kola [23].

The herbal remedies during pregnancy are used for common conditions such as heartburn, pre-mature labor, miscarriage, increase the risk of abortion and allergic reactions [24]. The use of herbal medicine during pregnancy is associated with educational status of women, income level of household and age of women [24]. Using herbal medicine during the first trimester and the third trimester is unsafe for the fetus [24].

The present work showed that the health care providers (30%), the family and friends (28.3%) are the most sources of recommendation of herb use, while self – remedy comes next by (26.4%). We suggest that pregnant women should talk advice from health professionals before consuming any herbal medicines. We think that using herbal medicine during pregnancy need further study for various herbs. Therefore, clinical trial research should be done to identify unfortunate consequences of herbal medicine use during pregnancy. The present data are consistence with other studies which cleared that the most important source of information about herbal remedies was found to be family and friends [25]. A some concern as there is no reason to believe that these persons are competent to give advice on herbs to pregnant women [25].

The sources of information that women would seek in the future differ from those they actually used in pregnancy [26]. The reason for this discrepancy could be an easier access or a lower threshold to discuss use of herbal remedies with family and friends compared to health care providers. The preferred future source was health food shops [26]. Doctors or

midwives were rarely informed about use of herbal remedies during pregnancy [26].

In the present work, around 85% of pregnant women have ages between 21-40-year-old which are graduated from the central region showed a positive attitude toward using of vitamins and minerals supplement in the last trimester of pregnancy. In other study, 31.9% of women has age between 20 to 40 years had a positive attitude towards using herbal supplements during pregnancy [27]. The positive attitude was significantly observed among pregnant women in the first trimester and graduated [27].

There has been much attention in the potential benefits of vitamins or minerals supplementation (containing additional micronutrients such as zinc, iron and copper), but the majority of these studies have been carried out in resource-limited countries with undernourished populations [28].

5. Conclusion

This study concluded that the prevalence of herbal supplements is considerably high among the graduated pregnant Saudi women during 1st trimester during who have positive attitude significantly higher among respondents in. The majority of the women relied on informal sources to use herbal supplements during pregnancy while others relied on healthcare provider and family and friends.

6. Recommendations

This study highlights the need to develop guidance and nutrition awareness programs to improve the herbals, vitamins and minerals intake among Saudi pregnant women. Further research focusing on local commonly used herbal medicines have to be carried out to evaluate the safety and efficacy of the herb's vitamins and minerals during pregnancy period. In addition, clinicians and healthcare providers should assess the need of using these supplements during pregnancy and follow the most recent evidence-based.

7. References

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