

## Reproductive health issues in Pakistan; do myths take precedence over medical evidence?

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### Abstract

**Objective:** To analyse the prevalence of myths pertinent to healthcare issues of females of reproductive age.

**Methods:** This cross-sectional, simple descriptive, knowledge, attitude and practices-education research was conducted at the Combined Military Hospital, Peshawar, Pakistan, from February to August 2016. A 30-item self-designed questionnaire was applied, collecting demographic details and answers to 21 close-ended questions encompassing the prevalence of myths pertinent to reproductive health issues of women in Pakistan. Every question had three options, Yes(myth), No(correct answer) and Don't Know(unsure). SPSS 21 was used for data analysis.

**Results:** There were 594 participants in the study. The overall mean age was  $35.11 \pm 12.711$  years and the mean duration of education was  $9.41 \pm 6.353$  years. Besides, >50% answers positive for myths and <50% answers positive for myths were given by 326(54.9%) and 268(45.1%) respondents, respectively. The prevalence of myths was directly proportional to age ( $p=0.004$ ), and inversely proportional to education ( $p<0.001$ ) and socio-economic class ( $p<0.001$ ); impact of education was stronger than socio-economic class (Pearson's chi-square being 74.189 and 48.672, respectively). Khyber Pakhtunkhwa-based respondents harboured more myths ( $p=0.024$ ). There was no significant impact of marital status ( $p=0.099$ ).

**Conclusion:** The participants held significant amount of myths regarding health issues in reproductive age.

**Keywords:** Menstruation, Adolescent pregnancy, Caesarean section, Postpartum period. (JPMA 67: 1232; 2017)

### Introduction

No society can deny the importance of health/disease-related beliefs and practices in its culture.<sup>1-3</sup> Women are a linchpin to any society. Researchers have always focused on women's health issues,<sup>4,5</sup> especially reproductive health matters.<sup>5-7</sup> Globally, females not only lack precise knowledge about reproductive health,<sup>5,8</sup> but also tend to adhere to misconceptions/malpractices.<sup>5,8,9</sup> It might be due to educational, socio-cultural or regional barriers peculiar to any society.<sup>5,8-10</sup> The friends and families also affect a women's attitude towards customary myths/fallacies.<sup>5</sup> Pakistan is a country with versatile geological, climatic zones and various sub-societies within. It has a multitude of cultural and traditional zones with varied health-related concepts in different areas. The beliefs are quite often saturated with misconceptions and myths.<sup>9</sup> Myths prevail in this society since ages; lack of education and socio-cultural misbeliefs further nurture these misconceptions. Internationally, too, researchers have ascertained ample of myths and fallacies in different societies.<sup>5,6,8,9</sup> The myths harboured are frequently pertinent to food, medicines (conventional/orthodox) and health-related events, including diseases of females of reproductive age (causation/transmission).<sup>8,9</sup> Different

myths prevail in different regions of Pakistan; areas with stronger traditions remain more adherent to conventional fallacies. Peshawar is a metropolitan city of Pakistan with a rich culture. Various myths are very commonly encountered regarding reproductive health of females, yet formal research about subject matter is scarce. The authors speculated that firstly, a considerable amount of myths must be prevalent among ladies of this region, and secondly, this prevalence might be affected by various demographic factors. No such research had been carried out in subject population before the present study, according to our knowledge. The current study was planned to analyse the prevalence of myths pertinent to health care issues of females of reproductive age along with association of this prevalence with vital demographic features.

### Subjects and Methods

This descriptive, cross-sectional study was conducted at the Combined Military Hospital, Peshawar, Pakistan, from February to August 2016. It was a Knowledge, Attitude and Practices (KAP)-Educational study. Approval from the institutional ethics review board was taken. Keeping confidence level, margin of error and response distribution at 95%, 5% and 50%, respectively, a sample of 385 participants was calculated to represent 3.6 million population of Peshawar. A self-designed questionnaire was used as a study instrument. The reliability of the

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questionnaire was checked through test-retest reliability by asking the same questions under the same conditions and that produced identical results. Similarly, validity of the questionnaire was also tested through face validity, content validity and criterion validity, and all of them produced satisfactory results. It was a 30-item questionnaire: 9 questions described vital demographic details (age, education, marital and socioeconomic status, province to which the subject primarily belonged); and 21 closed-ended questions encompassed myths prevalent in Pakistan pertinent to menstruation, abortion, pregnancy and delivery, Caesarean section and post-partum phase (Annexure). The term garam food was used in the

questionnaire, which in Pakistan is mostly used for those food items like dry fruits and spices which are considered to significantly enhance metabolism and cause various side effects like epistaxis, increased blood pressure, heavy menstruation and risk of abortion, etc. Desi ghee is commonly used in this region, which is made from simmered butter and churned cream, from which liquid residue is removed. Every question had three options, Yes (myth), No (correct answer) and Don't Know (unsure). A qualitative variable was made "total answers given as Yes" (myths), sub-categories being >50% or <50%, (which was considered as the main outcome variable, and was cross-tabulated via chi-square with demographic factors). Prior

**ANNEXURE**  
**DEMOGRAPHIC FORM FOR MYTHS AND MISCONCEPTIONS ABOUT WOMEN'S HEALTH**

This study has been conducted to analyze the level of knowledge among ladies regarding women's health related issues in reproductive age. Participation is on volunteer basis, confidentiality is strictly under-taken, all the forms will be discarded after completion of research. Your kind participation will definitely help the doctors to improve the public knowledge about the subject.

S.NO	QUESTION	1	2	3	4
1.	Name (optional)				
2.	Age (optional)				
3.	Age group (Years)	<20	20-39	40-59	≥60
4.	Gender	Male	Female	X	X
5.	Marital status	Single	Married	X	X
6.	Education				
7.	Education Group	Nil	Primary-Matriculate	Intermediate-Master	Professional/Consultant
8.	Socioeconomic class	Low	Middle	Upper	X
9.	Province	KPK	Others	X	X

S.NO	QUESTION	ANSWERS		
10	Do you think there is something like GARAM FOOD?	YES	NO	Don't Know
11	Do you think one should avoid to take GARAM food during menses	YES	NO	Don't Know
12	Do you think one should avoid to bathe during menses?	YES	NO	Don't Know
13	Do you think GARAM food can cause abortion?	YES	NO	Don't Know
14	Do you think lifting weight can cause abortion?	YES	NO	Don't Know
15	Do you think climbing stairs can cause abortion?	YES	NO	Don't Know
16	Do you think squatting for example for broom/mopping can cause abortion?	YES	NO	Don't Know
17	Do you think wearing heels can cause abortion?	YES	NO	Don't Know
18	Do you think it is good to take maximum rest during pregnancy?	YES	NO	Don't Know
19	Do you think milk intake causes cough during pregnancy?	YES	NO	Don't Know
20	Do you think intake of castor oil facilitates normal vaginal delivery?	YES	NO	Don't Know
21	Do you think intake of DESI GHEE facilitates normal vaginal delivery?	YES	NO	Don't Know
22	Do you think weight gain persists longer after caesarean as compared to normal delivery?	YES	NO	Don't Know
23	Do you think backache persists more after caesarean as compared to normal delivery?	YES	NO	Don't Know
24	Do you think a lady becomes unable to lift weight after caesarean for good?	YES	NO	Don't Know
25	Do you think it is good to get regular MALISH (massage) done during puerperium?	YES	NO	Don't Know
26	Do you think intake of milk during puerperium causes cough?	YES	NO	Don't Know
27	Do you think that tummy muscles become lax if cold water is drunk during puerperium?	YES	NO	Don't Know
28	Do you think body gets swollen if bath is taken during puerperium?	YES	NO	Don't Know
29	Do you think high calorie food like butter/DESI GHEE etc should be taken during puerperium?	YES	NO	Don't Know
30	Do you think swelling on body persists for months after delivery?	YES	NO	Don't Know

KPK: Khyber Pakhtunkhwa.

estimation of non-response rate was 50%. The sampling units were those first consecutive 800 women who volunteered to participate in the research. Since all those women reporting to the outpatient departments (OPDs) were random, the simple random sampling technique/methodology was used. Moreover, 800 samples belonged to different quarters of the society; therefore all the hospitals would have identical results. Hence, instead of taking samples from different institutes, a sufficient number of samples were taken from the same hospital. The purpose of the study was explained to all participants and informed consent was taken from them. Forms were then distributed among the participants, and they were allowed to communicate/ask questions. Those who required help were provided with assistance to fill in the forms. Females less than 18years of age, having severe language barrier or any declared mental/psychological disorder were excluded. To enhance comfort/privacy/confidentiality, they were provided with private space to fill in the forms;any respondent who required assistance was helped by lady doctors fluent in her mother tongue. A few

participants took the forms home and deposited them back. Data was analysed using SPSS 21. Qualitative data was expressed as frequencies and percentages while quantitative as mean  $\pm$  standard deviation (SD) (range from minimum to maximum).  $P < 0.05$  was considered as significant.

**Results**

Of the 800 forms, 594(74.3%) completed forms were returned. The mean age and the duration of education were  $35.11 \pm 12.711$  years (range: 19-70) and  $9.41 \pm 6.353$  years (range: 0-23), respectively. Moreover,  $>50\%$  Yes answers and  $<50\%$  Yes answers were given by 326(54.9%) and 268(45.1%) participants, respectively. The three

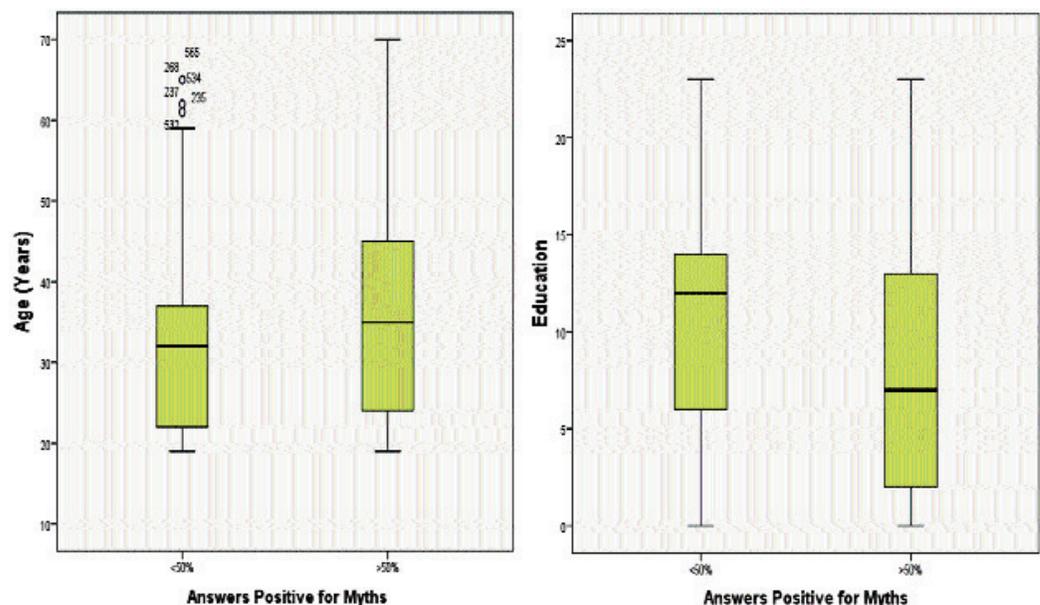


Figure: Comparison between impact of age and education on answers positive for myths.

Table-1: Qualitative demographic features of study participants (n=594).

Age(Years)	Frequency	Percent	Education	Frequency	Percent
<19	88	14.8	Nil	152	25.6
20-39	299	50.3	Primary-Matriculate	156	25.6
40-59	180	30.3	Intermediate-Masters	195	32.8
$\geq 60$	27	4.5	Professional-Consultant	91	15.3

Province	Frequency	Percent	SEC	Frequency	Percent
KPK*	468	78.8	Low	238	40.1
Non-KPK*	126	21.2	Middle	208	35.0
<b>Marital Status</b>	<b>Frequency</b>	<b>Percent</b>	Upper	148	24.9
Married	376	63.3			
Single	218	36.7			

\*KPK: Khyber Pakhtunkhwah.  
SEC: Socio-economic class.

**Table-2:** Answers given by Study Participants Regarding Various Myths Pertinent to Females' Health Issues (Frequency/Percentage).

S.No	Question	Yes	No	Don't Know
A	General Health Question			
1	Do you think there is something like GARAM FOOD?	417/70.2	127/21.4	5/8.4
B	Questions Pertinent to Menstruation			
1	Do you think one should avoid to bath during menses?	372/62.6	182/30.6	40/6.7
C	Questions Pertinent to Abortion			
1	Do you think lifting weight can cause abortion?	454/76.4	112/18.9	2.8/4.7
2	Do you think wearing heels can cause abortion?	285/48.0	239/40.2	70/11.8
D	Questions Pertinent to Pregnancy and Delivery			
1	Do you think it is good to take maximum rest during pregnancy?	367/61.8	197/33.2	30/5.1
2	Do you think intake of castor oil facilitates normal vaginal delivery?	245/41.2	107/18.0	242/40.7
3	Do you think intake of DESI GHEE facilitates normal vaginal delivery?	287/48.3	117/19.7	190/32.0
E	Questions Pertinent to Caesarean Section			
1	Do you think weight gain persists longer after caesarean as compared to normal delivery?	386/65.0	134/22.6	74/12.5
2	Do you think backache persists more after caesarean as compared to normal delivery?	373/62.8	101/17.0	120/20.2
3	Do you think a lady becomes unable to lift weight after caesarean for good?	332/55.9	196/33.0	66/11.1
F	Questions Pertinent to Post-partum Phase			
1	Do you think it is good to get regular MALISH (massage) done during puerperium?	318/53.5	126/21.2	150/25.3
2	Do you think that tummy muscles become lax if cold water is drunk during puerperium?	307/51.7	107/18.0	180/30.3
3	Do you think body gets swollen if bath is taken during puerperium?	250/42.1	202/34.0	142/23.9
4	Do you think high calorie food like butter, DESI GHEE etc should be taken during puerperium?	344/57.9	152/25.6	98/16.5
5	Do you think swelling on body persists for months after delivery?	358/60.3	126/21.2	110/18.3

commonest myths were: 454(76.4%) thought that mild-moderate weight lifting can cause abortion, 417(70.2%) vetted the concept of some foods being garam, while 386(65.0%) declared that weight gain persists for longer duration after C-section than after vaginal delivery. The commonest correct answers were: 332(55.9%) disagreed that taking bath should be avoided in menses, 278(46.8%) disapproved that climbing stairs can cause abortion and 277(46.6%) disregarded that mild intake during pregnancy can cause cough. The highest scores for answer as Don't Know were: 182(30.6%) didn't know whether milk intake in puerperium causes cough or not, 180(30.3%) weren't sure that taking bath during puerperium can cause body swelling and 190(32.0%) were unsure that can desi ghee intake at term facilitate normal delivery.

There was significant inversely proportional impact of education ( $p < 0.001$ ) and socio-economic class (SEC) ( $p < 0.001$ ) on prevalence of myths, with impact of the former being stronger than the latter (Pearson's chi-square 74.189 and 48.672, respectively). The frequencies for more than 50% answers as Yes were as follows: no education 115(75.6%), primary-matriculate 95(60.9%), intermediate-master 74(37.9%), professional-consultant 26(28.6%, and low SEC 160(69.3%), middle SEC 95(46.3%) and upper SEC 55(34.8%) (Tables-1, 2).

Similarly, more aged ( $p = 0.004$ ) and clients belonging to

Khyber Pakhtunkhwa (KPK) ( $p = 0.024$ ) significantly harboured more myths than those respondents who did not belong to KPK but were currently residing in Peshawar. Older and less educated clients had stronger predilection for myths with more variance and less consistency. There was no significant impact of marital status on dependent variable ( $p = 0.099$ ) (Figure).

## Discussion

Knowledge attitude and practices applicable to health-related matters play a pivotal role in defining the strengths of a society.<sup>1-3</sup> No society is completely free of myths/misbeliefs regarding health/disease.<sup>5-9</sup> This study documented high prevalence of myths, with more predominance in older, less-educated and socio-economically under-privileged women. Literature reveals that older women harbour more myths,<sup>5</sup> while younger ones are more casual in hygienic practices.<sup>11</sup> Education should unambiguously lead to annulment of myths, but researcher documented that even educated ladies stick to various myths, which depicts dominance of socio-cultural ideology over scientific knowledge.<sup>1</sup>

Religious, socio-cultural and economic factors play a pivotal role in adherence to non-scientific beliefs.<sup>8,11</sup> These myths percolate in the culture of a society and are passed on generation after generation.<sup>1-3</sup> In this study, participants from KPK harboured more myths. Authors authenticate that within the same society, the prevalence

of myths varies in different regions.<sup>4</sup>

Menstruation is a natural health matter encountered by a woman every month.<sup>11</sup> Globally, menstrual health and hygiene is observed to be insufficient. This research showed considerable prevalence of fallacies regarding nutrition and hygiene during menstruation. In India, the knowledge among adolescent females about menstruation is inadequate, myths prevail, and socio-cultural and economic factors affect their practices.<sup>11-13</sup> Poureslami et al.<sup>13</sup> endorsed that in Iran, 78% females neither use hygienic sanitary materials nor do they take bath during menses, 33% avoided even mild to moderate physical activities, while 67% take self-prescribed medicines for dysmenorrhea. Younger girls had poorer menstrual hygiene.<sup>11</sup> International organisations, such as the World Health Organisation (WHO) and the United Nations Children's Fund (UNICEF) have recommended conduction of formal programmes addressing menstrual hygiene/health.<sup>11,12</sup>

Pregnancy is a much-awaited phase of reproductive life for almost every female. This physio-psychological phenomenon turns out to be very challenging phase leads to development of various phobias with a tendency to start believing in myths.<sup>4</sup> Antenatal care is a direct measure of a society's concern towards maternal and child health. It must cover gynaecological management, education and counselling.<sup>6,14</sup> In Pakistan, various myths are considered to affect gestation<sup>15</sup> and parturition.<sup>16</sup> In this study, the prevalence of myths regarding food intake and physical activities in pregnancy and delivery was considerable. Niloufer et al.<sup>15</sup> reported that even viewing an eclipse or using a scissor/knife by pregnant lady is considered hazardous for maternal/foetal health. The most commonly practised myths revolve around dietary intake. Food is not just a necessity of life, it's a charm/activity or even a craze for many people. When it comes to health/disease, a prime concern of many individuals is details about foods which can be taken. To many, pregnancy brings a "permit to eat". A majority of pregnant ladies take more than recommended amount of calories,<sup>17</sup> validating the well-known myth of "eating for two",<sup>18,19</sup> In Bangladesh<sup>17</sup> and in Saudi Arabia<sup>20</sup> there is a trend to take excessive calories/proteins and to avoid certain foods/spices with no scientific reasons. A multitude of foods, herbs and conventional/orthodox products are taken with no documentary proof to support their role in gestation. Okafer et al.<sup>8</sup> described usage of concoctions of herbs ("Aseje" and "Agbo"), which are declared to keep the pregnant healthy, preclude miscarriages/antenatal complications/diseases in mother and foetus, and facilitate easy delivery. Avoiding adequate

activity in pregnancy is also a chief point of concern. Pregnant ladies become more sedentary due to their symptoms, fear of injury, demands of job/children/family, dearth of motivation, habitual laziness or myths.<sup>4</sup> They stop lifting even mild weight. Scientific guidelines have been formulated to define amount and type of physical activities and weight lifting admissible during pregnancy,<sup>21</sup> but unfortunately, myths often take precedence over scientific research.

Mode of delivery is a nightmare for almost every pregnant lady. A majority of clients fear C-section throughout their pregnancy. In this research, the phobias pertinent to C-section were quite high. Ladies avoid antenatal visits to evade this dread,<sup>8,22</sup> and may end up in mild complications to even fatal outcomes.<sup>8</sup> Age, education and socio-economic factors directly affect the choice regarding mode and place of delivery.<sup>23</sup> This study also highlighted the presence of various myths prevalent in post-partum phase. Myths/malpractices have been documented to frequently lead to otherwise avoidable post-partum complications.<sup>24,25</sup>

This study has validated the hypothesis posed that there is a significant occurrence of myths regarding reproductive health matters of females with significant impact of various demographic features. Researchers ratify that the only precise management of myths within a society, after analysing its types and extent, is by educating the public.<sup>8,9,13,15,18</sup> Aptly trained staff like community health volunteers/workers (CHVs/CHWs) must be incorporated to achieve specified targets and ultimate aim of attenuating the misconceptions regarding reproductive health issues.<sup>26</sup>

Limitations of this study cannot be denied. Bigger sample size, more versatile study populations from urban and rural zones of KPK, break-up of various religions and male participants could have altered the results. Questionnaire was self-designed, and many commonly believed myths must have been skipped. The topic is scarcely studied, so additional literature, especially more recent researches on similar topics, could not be found by the authors. Nevertheless, this study gives a way forward for researchers to carry similar but better explorations. Future studies may address menstruation, pregnancy and post-partum myths individually.

## Conclusion

The participants held significant amount of myths regarding health issues in reproductive age. These myths need to be precisely identified, addressed and diminished by formal education and counselling at all tiers.

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