Original Investigation

Effect of gender role orientation on attitudes toward menstruation in a sample of female University students

Ashraf Ghiasi. Effect of gender role orientation on attitudes toward menstruation

Ashraf Ghiasi

Center for Health Related Social and Behavioral Sciences Research, Shahroud University of Medical Sciences, Shahroud, Iran

Address for Correspondence: Ashraf Ghiasi
e.mail: a.ghiasi25@gmail.com

ORCID ID:

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Abstract

Objective: The aim of this study was to examine the effect of gender role orientation on attitudes toward menstruation in a sample of Iranian female students of medical sciences.

Materials and Methods: Three hundred female university students (94%; N = 282 response rate) via stratified random sampling were enrolled to the study. Data were collected using demographic questionnaire, Menstrual Attitude Questionnaire, and short version of the Bem Sex Role Inventory. Data were analyzed with SPSS v.18. Analyses were done using Kruskal-Wallis test and Mann-Whitney U test.

Results: The mean scores of the MAQ subscales ranged from 3.7 ± 1.35 to 5.6 ± 1.3, indicating that most of the respondents had natural to moderate attitudes toward menstruation. When participants were classified into one of four gender-role categories of BSRI, results show that the undifferentiated group with 33.7% was higher than other gender role groups. The undifferentiated group was significantly less likely than the other groups to perceive "menstruation as a natural event".

Conclusion: The study shows an association between gender role orientation and attitudes toward menstruation in female university students. However, further research is still necessary in this issue.

Keywords: Attitudes, Bem Sex Role Inventory, Female students, Gender-role orientation, Menstruation

Introduction

Menstruation, the cyclical shedding of blood and endometrium from the uterine cavity, is a physiological process that occurs throughout a woman's reproductive years (1). Although menstruation is a natural/biological event, perimenstrual symptoms (immediately before and during menstruation), including anxiety, depression, irritability, tension, mood swings, fatigue, skin disorders, breast tenderness, swelling, weight gain, cramps, and backache affect a significant percentage of women (2, 3). Evidence suggested that attitudes toward menstruation can influence the reporting of perimenstrual symptoms (4). For example, Lu (2001) found a significant association between negative attitudes toward menstruation and the experience of perimenstrual symptoms in Taiwanese women (5). Studies have also demonstrated that a woman's beliefs about and attitudes toward menstruation influenced by socio-cultural factors, and family environments (6-8). For example, Hoerster and Rose (2003) had compared Indian and US women’s attitudes toward menstruation. They found that menstruation was perceived as significantly more debilitating and less natural event by American women compared to Indian women (9). A few studies have been investigated the effect of gender-role orientation- the extent to which a person believes or perceives that she (or he) possesses gender-typed characteristics- on attitudes toward menstruation (10, 11). Chrisler (1988) show that undifferentiated and feminine college students were more likely than the androgynous and masculine students to perceive menstruation as a bothersome event; undifferentiated and masculine college students were more likely than the androgynous and feminine students to perceive menstruation as a debilitating event (11). The effect of gender-role orientation on menstrual attitudes is not entirely clear. Hence, in the present study Menstrual Attitude Questionnaire and Bem Sex Role Inventory were administered to a sample of female students with the aim of examining the impact of gender-role orientation on attitudes toward menstruation.

Material and Methods

Participants
In the academic year 2015/16, there were nearly 900 female students at 4 schools of Shahroud University of Medical Sciences. Thus the sample size was estimated 269 using Krejcie & Morgan Table. After adding 10% none-response rate, the final sample size for this cross-sectional study became 300. Stratified random sampling method was used to choose study participants. The inclusion criteria in this study were as follow: Iranian nationality; aged between 18 and 30 years; and no history of polycystic ovary syndrome or mental disorders.

**Instruments**

Data were collected using demographic questionnaire, 30 item version of the Bem Sex Role Inventory, and Menstrual Attitude Questionnaire.

The demographic questionnaire included questions about menstrual status (age at first menstruation, menstrual cycle length, menstrual frequency, and regulation of menstruation), age and marital status. The original Bem Sex Role Inventory (BSRI; Bem, 1974) includes 20 masculine, 20 feminine, and 20 neutral items, each item range from 1 ‘never / almost never true’ to 7 ’always / almost always true’. It was designed to categorize subjects into four groups: masculine (high masculine, low feminine), feminine (high feminine, low masculine), androgynous (high masculine, high feminine), and undifferentiated (low masculine, low feminine) (12). In this study the short 30-item version of the BSRI was used. Validity and reliability of the Persian version of this questionnaire were confirmed in previous studies (13). In present study, the internal consistency coefficient of the femininity and masculinity subscales were .76 and .84, respectively. Menstrual Attitude Questionnaire with 33-items divided into five subscales: (1) menstruation as a deliberating event-12 items, (2) menstruation as a bothersome event-6 items, (3) menstruation as a natural event-4 items, (4) anticipation and predication of the onset of menstruation-4 items, and (5) denial of any effects of menstruation-7 items. The items are scored on a likert scale (1= strongly disagree to 7= strongly agree). (14). In current study alpha coefficient values of the five subscales ranged between 0.77 and 0.85.

**Statistical analysis**

Data was analyzed by SPSS v. 18. Descriptive statistics were calculated where appropriate for each of the variables. Kruskal-Wallis test and Mann-Whitney U test were used to examine the impact of gender role orientation on female university students' attitudes toward menstruation. The p < 0.05 was considered statistically significant.

**Results**

Eighteen recruited participants for the study were excluded because of failure to complete the questionnaire, resulting in a response rate of 94%. The participants' mean age was 21.8 (± 2.2) years. The mean age at onset of menstruation was 12.81 (±1.49) years, mean length of menstrual cycle was 6.43 (±1.39) days, and mean menstrual frequency was 28.87 (±4.4) days. Most study participants (71.6%) had regular menstrual pattern and majority of them (88.3%) were single.

The mean scores on the MAQ subscales ranged from 3.7 ± 1.35 to 5.6 ± 1.3, indicating that most of the participants had natural to moderate attitudes toward menstruation. Table 1

In order to determine the gender roles of feminine, masculine, androgynous and undifferentiated, masculine and feminine median scores were calculated. Median masculinity score was M: 5.36 and the median femininity score was F: 5.6.

In this study, 16.6% (N=47) of participants were in feminine gender role group, 16.6% (N=47) were in masculine, 33.7% (N=95) were in undifferentiated and 33% (N=93) of participants were in androgynous gender role group.

There was a significant difference in "menstruation as a natural event" subscale of the MAQ among the participants based on Bem Sex Role Inventory—masculine, feminine, undifferentiated, and androgynous—(p<0.05). See Table 2.

As seen in table 3, the undifferentiated group was significantly (p<0.05) less likely than the androgynous, feminine, and masculine groups to perceive menstruation as a natural event.

**Discussion**

The current study investigated the effect of gender role orientation on attitudes toward menstruation in a sample of female university students. When analyzing attitudes toward menstruation, result showed that the highest and lowest mean scores on the MAQ subscales among participants were anticipation and predication of the onset of menstruation and denial of any effects of menstruation, respectively. This result is consistent with a previous study among women in the US military (15). In another study by Guvenc et al (2012), among Turkish nursing students, the highest and lowest mean scores on the MAQ subscales were menstruation as a natural event and denial of any effects of menstruation, respectively (16). When participants were classified into one of four gender-role categories of BSRI, masculine, feminine, androgynous, or undifferentiated, results show that the percentage of undifferentiated group was higher than other gender role groups. In study by Mullis et al. (1989) masculine was the most frequent gender role type among a sample of female adolescents (10). These differences between studies could be due to different cultural, social, or religious backgrounds (13, 17). In the present study, there was a significant difference in only one of the five subscales of the MAQ based on four gender role categories of BSRI. Undifferentiated individuals were significantly less likely than the other gender role types to...
perceive menstruation as a natural event. This indicates that gender role orientation is a small to moderate contributor to women's attitude toward menstruation. A previous study by Chrisler (1988) conducted on two samples. Sample A were 11 men, aged 28 - 39 years, and 20 women, aged 30 - 45 years. Sample B were 19 men, aged 18 - 22 years, and 37 women, aged 18 - 23 years. Results showed that in sample A, gender orientation had no significant effect on attitudes toward menstruation. However in sample B, undifferentiated and feminine college students were more likely than the androgynous and masculine students to perceive menstruation as a bothersome event; undifferentiated and masculine college students were more likely than the androgynous and feminine students to perceive menstruation as a debilitating event (11).

Several limitations in the study ought to be considered. This research was conducted among female students of medical sciences; the findings may not be same for other segments of the female population. Because it is a cross-sectional study design, so it can only illuminate the current situation of participants. Furthermore, this study relied on self-reports of gender-role orientation, and these reports may not have always been accurate. In conclusion, in this study there was a significant difference in "menstruation as a natural event" subscale of MAQ among the female university students based on four categories of BSRI (androgynous, undifferentiated, masculine, and feminine). The undifferentiated group was significantly less likely than the other groups to perceive menstruation as a natural event.

Ethics Committee Approval: The ethics committee of Shahroud University of Medical Sciences
Informed Consent: All students participating in the study signed informed consent forms.
Peer-review: Externally peer-reviewed.
Conflict of Interest: Nil
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References
Table 1: Mean and Standard Deviation (SD) scores on the subscales of Menstrual Attitude Questionnaire

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debilitating</td>
<td>4.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Bothersome</td>
<td>4.1</td>
<td>1.53</td>
</tr>
<tr>
<td>Natural</td>
<td>5.4</td>
<td>1.07</td>
</tr>
<tr>
<td>Predictable</td>
<td>5.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Denial</td>
<td>3.7</td>
<td>1.35</td>
</tr>
</tbody>
</table>

Table 2: Differences in attitudes toward menstruation based on gender role orientation

<table>
<thead>
<tr>
<th>MAQ Subscales</th>
<th>Masculine Mean Rank</th>
<th>Feminine Mean Rank</th>
<th>Androgynous Mean Rank</th>
<th>Undifferentiated Mean Rank</th>
<th>Kruskal - Wallis $\chi^2$, df=3</th>
<th>$P$ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debilitating</td>
<td>130.46</td>
<td>136.81</td>
<td>117.87</td>
<td>126.93</td>
<td>2.42</td>
<td>0.448</td>
</tr>
<tr>
<td>Bothersome</td>
<td>107.04</td>
<td>128.7</td>
<td>124.75</td>
<td>134.8</td>
<td>4.35</td>
<td>0.225</td>
</tr>
<tr>
<td>Natural</td>
<td>129.5</td>
<td>134.9</td>
<td>141.37</td>
<td>103.63</td>
<td>14.1</td>
<td>* 0.003</td>
</tr>
<tr>
<td>Predictable</td>
<td>117</td>
<td>135.15</td>
<td>135.19</td>
<td>115.29</td>
<td>4.97</td>
<td>0.174</td>
</tr>
<tr>
<td>Denial</td>
<td>127.25</td>
<td>127.76</td>
<td>125.38</td>
<td>125.21</td>
<td>0.58</td>
<td>0.996</td>
</tr>
</tbody>
</table>

* Statistical significance, $p<0.05$
Table 3: The Post-Hoc Mann–Whitney U test results

<table>
<thead>
<tr>
<th>MAQ Subscale</th>
<th>Gender role types</th>
<th>Mann-Whitney U</th>
<th>Z</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menstruation as a natural event</td>
<td>Feminine-Masculine</td>
<td>747.000</td>
<td>-0.342</td>
<td>0.732</td>
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<tr>
<td></td>
<td>Feminine-Androgyny</td>
<td>1586.000</td>
<td>-0.633</td>
<td>0.527</td>
</tr>
<tr>
<td></td>
<td>Masculine-Androgyn</td>
<td>1490.000</td>
<td>-0.941</td>
<td>0.347</td>
</tr>
<tr>
<td></td>
<td>Androgyny-Undifferentiated</td>
<td>2587.000</td>
<td>-3.468</td>
<td>0.001*</td>
</tr>
<tr>
<td></td>
<td>Feminine-Undifferentiated</td>
<td>1263.000</td>
<td>-2.564</td>
<td>0.01*</td>
</tr>
<tr>
<td></td>
<td>Masculine-Undifferentiated</td>
<td>1321.000</td>
<td>-2.024</td>
<td>0.043*</td>
</tr>
</tbody>
</table>

*Statistical significance, \( p < 0.05 \)