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Correlates and Variation in Early Maladaptive Schema Domains Between Day 1 and Day 15 of Menses Among Lebanese Female University Students

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ABSTRACT

Objective: To investigate variation in early maladaptive schema (EMS) domains between day 1 and day 15 of menses among Lebanese female university students and assess factors potentially responsible for this variation, as well as the impact of EMS on premenstrual symptoms.

Methods: This cross-sectional study enrolled 84 female participants between June and September 2020. The study consisted of interviewing participants (questionnaire 1) on the first day of their menses and then contacting them 15 days later to complete the follow-up survey (questionnaire 2).

Results: Lower means of emotional deprivation, social isolation, defectiveness, and negativity were found on day 15 compared to day 1. Older age was significantly associated with a decrease in punitiveness on day 15 ($P = .012$). Furthermore, higher anxiety was significantly associated with increased emotional deprivation ($P = .024$), self-sacrifice ($P = .008$), unrelenting standards ($P = .005$), entitlement ($P = .025$), and approval seeking ($P = .013$) on day 15. Higher depression was significantly associated with increased emotional deprivation ($P = .033$), defectiveness ($P = .04$), failure ($P = .043$), dependence ($P = .042$), and subjugation ($P = .048$) on day 15. Higher stress was significantly associated with an increase in vulnerability ($P = .017$), unrelenting standards ($P = .002$), negativity ($P = .024$), and punitiveness ($P = .008$) on day 15. Moreover, having a monthly income compared to not was significantly associated with decreased emotional deprivation ($P = .015$), abandonment ($P = .029$), defectiveness ($P = .039$), failure ($P = .033$), dependence ($P = .039$), subjugation (.018), and punitiveness ($P = .014$) on day 15. Finally, higher physical activity was significantly associated with an increase in self-sacrifice ($P = .03$) on day 15.

Conclusions: Potential treatment with schema therapy must be offered by experienced psychologists to eligible patients to minimize the apparent detriment caused by EMS to interpersonal relationships, social interactions, lifestyle, work performance, emotional well-being, and overall health-related quality of life.

Premenstrual syndrome (PMS) refers to a collection of cyclic psychosomatic symptoms that a woman may experience during the late luteal phase of her menstrual cycle and resolves by the end of menstruation.[1] It is a prevalent condition, significantly reported by 20% to 50% of menstruating women, with peak ages in the late 20s and early 40s.[2] Emotional symptoms include anger, irritability, loss of libido, depressed mood, anxiety, and social withdrawal.[3] Additionally, among several physical complaints, women may experience headaches, fatigue, myalgia, breast tenderness, constipation, and bloating.[3] However, symptoms vary according to each woman in strength, extent, and cycle regularities, depending on environmental, psychosocial, hormonal, physiologic, and gynecologic factors (intake of oral contraceptives, menses regulation, and average length of the menstrual cycle).[4] In 23% to 31% of cases, symptom severity might affect a woman's daily functioning and impede her economic, social, and academic achievements.[5] A previous meta-analysis related PMS to several psychological factors,[6] including personality traits, psychological stress, coping styles,[1] and early maladaptive schemas (EMS).[7]

EMS are pervasive, self-defeating patterns of information processing that show an individual's way of conceptualizing a set of stimuli.[8] They are based on information acquired through previous toxic/traumatic childhood experiences. All aspects of childhood, such as culture, relationships, medical conditions, and school experiences, can profoundly impact a child's way of viewing and interacting with the world.[8] EMS involve memories, emotions, cognitions, and sensations that become deepened and extended throughout the lifetime, creating a significant degree of dysfunction.[9] Young et al[8] identified 18 schemas grouped into 5 domains of unmet emotional needs: disconnection/rejection, impaired autonomy/performance, impaired limits, other directedness, and hypervigilance/inhibition.[10] According to Alimoradi and Nejat,[11] EMS may remain dormant until transiently activated by stressful situations related to the specific schema. For instance, studies have reported that university life is a stressful period wherein students are more vulnerable to developing emotional disorders.[12] Investigations have shown associations between EMS and sociodemographic characteristics (age, marital status, and monthly income),[8] body mass index (BMI),[13] stressful situations,[14] anxiety,[15] depression,[16] physical activity,[17,18] sleep patterns,[19] and physiologic changes.[7] Moreover, researchers have reported

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Clinical Points

- Age, physical activity, monthly income, depression, anxiety, stress, and different days of the month were significantly involved in the activation of latent early maladaptive schemas (EMS) during days 1 and 15 of the menses.
- Potential treatment with schema therapy should be offered to eligible patients by experienced psychologists to minimize the effects of EMS on interpersonal relationships, social interactions, lifestyle, work performance, emotional well-being, and overall health-related quality of life.

that gender also moderated the relationship between childhood experiences and EMS formation. Adolescent girls tend to score higher on several domains compared to adolescent boys.[20] This was highly correlated to multiple causes including the higher rates of traumatic childhood experiences among females and the cultural practices that assign different societal roles based on gender with less focus on girls' self-development.[20] Additionally, a major contributor to the activation of EMS in female adolescents is hormonal changes during the menstrual cycle.[7] Ünsalver et al[7] reported that among the 18 EMS defined by Young et al,[8] vulnerability to illness, failure, defectiveness, and insufficient self-control significantly decreased by day 15 of menses. Likewise, Portella[21] found a positive association between premenstrual symptoms and 2 of the EMS: self-sacrifice and unrelenting standards.

While PMS is common among Lebanese women[22] and can significantly affect their physical and psychological well-being, especially in the conservative Arabic society, establishing a relationship between EMS and the cyclic variations might improve PMS treatment outcomes. It has been suggested that EMS underlie behavioral instability, and their management has resulted in improvement in psychological outcomes.[8] Thus, we conducted this study to investigate any variation in EMS domains between the first day of menses and day 15 among female university students in Lebanon, a country with many challenges, including an ongoing financial crisis, a crippling economic situation, and widespread antigovernment protests.[23] Additionally, we assessed factors that might be responsible for this variation such as sociodemographic characteristics, BMI, stress, anxiety, depression, premenstrual symptom severity, intake of oral contraceptives, menses regulation, average length of the menstrual cycle, physical activity, and sleep habits.

METHODS

Study Design

This study was conducted between June and September 2020 during the COVID-19 pandemic. During this period, the government implemented several lockdown procedures while regularly changing security measures according to the severity of the COVID-19 situation. Six pharmacy students were responsible for contacting female students from any university in Lebanon using a convenient sampling technique. Recruited females were then asked to share with other female friends to get them enrolled using the snowball technique. Respondents were briefed about the topic and the different aspects of the questionnaire before filling it out; their anonymity was also assured by members of the research team. The study consisted of interviewing participants (questionnaire 1) on the first day of the menses, then contacting them on day 15 to fill out the follow-up survey (questionnaire 2). Inclusion criteria included young women in college living in Lebanon.

Minimal Sample Size Calculation

Using the G-power software, and assuming a theoretical moderate effect size of 0.4 in the absence of similar studies, a 5% risk of error, and 80% power, the estimated minimal sample size was 54.

Questionnaire

The questionnaires given to participants were in Arabic, the official native language in Lebanon. The questionnaire distributed on day 1 of menses takes longer to complete and includes more parts than the follow-up questionnaire, which included only the last section of the first questionnaire. The first questionnaire included a sociodemographic category and a scale-based category regarding different factors as follows:

Sociodemographic data. Participants were asked about their general sociodemographic data, including age, education level, income, marital status, and menstruation information.

Beirut Distress Scale. This is a 10-item scale[24] validated in Lebanon for evaluating psychological distress. It is based on 6 factors, including anxiety, intellectual inhibition, depressive symptoms, demotivation, mood deterioration, and psychosomatic symptoms. A higher score is an indication of more distress (Cronbach α in this study = 0.907).

Lebanese Anxiety Scale. This scale comprises 10 items and is validated for use in the assessment of anxiety among adults and adolescents.[25,26] A higher score indicates a more anxious attitude (Cronbach α in this study = 0.933).

Montgomery-Asberg Depression Rating Scale. This 10-item scale, validated in Lebanon,[27] evaluates the core symptoms of depression by focusing on mood symptoms such as sadness, tension, pessimism, and suicidal thoughts. Responses were graded from 0 (no abnormality) to 6 (severe symptoms). A higher score is an indication of more depressive symptoms[28] (Cronbach α in this study = 0.879).

Young Schema Questionnaire–Short Form Version 3. This scale is the short version of the third edition, which is a 232-item form. It aims to identify 18 negative schemas using 90 rated self-descriptive statements. Participants must decide how well each item describes themselves. When they are not sure about the answer, they should base it on their emotional feeling, not on what they think is true.[29] The individual's level of activation in each of the 18 EMS is measured based on 5 statements on a graduated response scale ranging from 1 ("this is completely wrong for me") to 6 ("this describes

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me perfectly"). According to Young and Brown,[29] EMS are assessed by the proportion of responses with 5 ("most often true for me") or 6 ("that describes me perfectly") for the 5 statements. The score is expressed as a percentage, with the agreed score for a subject deemed as healthy being zero. The higher the activation level of the EMS, the higher the scores corresponding to the EMS. The Cronbach α values for each schema are summarized as follows: emotional deprivation (0.742), abandonment (0.789), mistrust (0.594), social isolation (0.733), defectiveness (0.734), failure (0.806), dependence (0.734), vulnerability (0.770), enmeshment (0.621), subjugation (0.576), self-sacrifice (0.837), emotional inhibition (0.648), unrelenting standards (0.820), entitlement (0.823), insufficient self-control (0.754), approval seeking (0.749), negativity (0.689), and punitiveness (0.689). The Arabic version of the scale was previously used in Lebanon.[31]

Statistical Analysis

Statistical Package for the Social Sciences 25 was used for the data analysis. There were no missing data in our database. Paired *t* test was also used to compare schemas between days 1 and 15. Moreover, the repeated measures analysis of variance (ANOVA) was conducted to assess correlates associated with the change in any schema on day 15. The results were adjusted over the following covariates: sociodemographic characteristics (age, marital status, and monthly income), stress, anxiety, depression, premenstrual symptom severity, intake of oral contraceptives, menses regulation, BMI, and average length of the menstrual cycle. Significance was set at $P < .05$.

RESULTS

Sociodemographic and Other Characteristics of the Participants

Of 100 female university students approached, 84 (84%) agreed to participate. The results showed that the participants' mean ± SD age was 27.00 ± 7.77 years, with 45.2% having no monthly income and 70.2% being single. Other characteristics of the participants are provided in Table 1.

Table 1. Sociodemographic and Other Characteristics of the Participants (N = 84)[a]

Variable	Participants
Monthly income, US $	
No income	38 (45.2)
Low (< 1,000)	25 (29.8)
Intermediate (1,000–2,000)	12 (14.3)
High (> 2,000)	9 (10.7)
Marital status	
Single	59 (70.2)
Married	25 (29.8)
Menses regulation	
No	55 (65.5)
Yes	29 (34.5)
Oral contraceptives	
No	62 (73.8)
Yes	22 (26.2)
Age, mean ± SD, y	27.00 ± 7.77
Body mass index, mean ± SD, kg/m^2	22.78 ± 3.85
Average length of menstrual cycle, mean ± SD, days	29.94 ± 3.65

[a]Data are presented as n (%) unless otherwise specified.

Bivariate Analysis

The bivariate analysis of the maladaptive schemas on days 1 and 15 showed that lower mean emotional deprivation, social isolation, defectiveness, and negativity were found at day 15 compared to day 1 (Table 2).

Repeated Measures ANOVA

A repeated measures ANOVA was conducted, taking the change of each maladaptive schema between days 1 and 15 as a dependent variable among the participants. After adjusting the analysis for the sociodemographic characteristics (age, marital status, and monthly income), stress, anxiety, depression, premenstrual symptom severity, intake of oral contraceptives, menses regulation, BMI, and average length of the menstrual cycle, the results showed that higher age was significantly associated with a decrease in punitiveness on day 15. Additionally, higher anxiety was significantly associated with increased emotional deprivation, self-sacrifice, unrelenting standards, entitlement, and approval seeking on day 15 (Table 3).

Higher depression was significantly associated with increased emotional deprivation, defectiveness, failure, dependence, and subjugation on day 15. Furthermore, higher stress was significantly associated with an increase in vulnerability, unrelenting standards, negativity, and punitiveness on day 15. Having a monthly income compared to no monthly income was significantly associated with a decrease in emotional deprivation, abandonment, defectiveness, failure, dependence, subjugation, and punitiveness on day 15. Finally, higher physical activity was significantly associated with an increase in self-sacrifice on day 15. It is noteworthy that none of the covariates were found to be associated with the following maladaptive schemas: mistrust, social isolation, enmeshment, emotional inhibition, and insufficient self-control (Table 3).

DISCUSSION

EMS are considered among the most important factors that can influence women's psychological well-being, especially when overlapping with the biological, mental, and social variations of menstruation.[7] Given that 97.2% of female Lebanese university students experience at least one distressing affective or somatic premenstrual symptom,[22] it is expected that some schemas that are usually dormant during nonstressful periods will become active at the onset of menses.[8]

In our study, emotional deprivation, social isolation, defectiveness, and negativity were higher on the first day of menses, possibly secondary to the intrusive Arabic culture wherein negative aspects of the menstrual cycle are still considered taboo, and women usually avoid sharing their emotions.[32] Improvement of these schemas by day 15 of

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Table 2. Unadjusted Comparison of the Maladaptive Schemas at Day 1 and Day 15 Among the Participants[a]

Maladaptive Schema	Day 1	Day 15	*P*[b]
Domain 1			
Emotional deprivation	10.53 ± 4.14	9.47 ± 3.40	**.002**
Abandonment	11.30 ± 4.77	11.25 ± 4.36	.829
Mistrust	11.86 ± 3.99	11.44 ± 3.77	.168
Social isolation	10.44 ± 4.14	9.74 ± 3.37	**.034**
Defectiveness	9.02 ± 3.65	8.33 ± 3.28	**.007**
Domain 1 total score: disconnection and rejection schema domain	53.15 ± 17.91	50.24 ± 14.20	**.011**
Domain 2			
Failure	8.51 ± 3.56	8.52 ± 3.32	.701
Dependence	9.19 ± 3.93	8.71 ± 3.22	.270
Vulnerability	10.70 ± 4.55	10.28 ± 3.87	.275
Enmeshment	11.19 ± 4.37	10.63 ± 3.63	.418
Domain 2 total score: impaired autonomy/performance schema domain	39.60 ± 13.74	38.15 ± 11.48	.114
Domain 3			
Entitlement	13.83 ± 5.76	13.83 ± 6.18	.645
Insufficient self-control	11.01 ± 4.45	11.30 ± 3.98	.137
Domain 3 total score: impaired limits schema domain	24.85 ± 9.58	25.13 ± 9.44	.610
Domain 4			
Subjugation	9.70 ± 3.61	9.14 ± 3.41	.107
Self-sacrifice	13.91 ± 6.14	13.96 ± 6.10	.531
Approval seeking	12.43 ± 5.08	12.94 ± 5.01	.121
Domain 4 total score: other-directedness schema domain	36.05 ± 11.75	36.05 ± 11.06	1
Domain 5			
Emotional inhibition	11.73 ± 4.45	11.12 ± 3.84	.084
Unrelenting standards	14.40 ± 6.00	14.66 ± 6.49	.575
Negativity	13.02 ± 7.64	11.88 ± 4.11	**.017**
Punitiveness	12.61 ± 4.32	13.16 ± 6.87	.360
Domain 5 total score: overvigilance/inhibition schema domain	51.76 ± 18.45	50.83 ± 17.61	.380

[a]Data are presented as mean ± SD.
[b]Numbers in bold indicate significant *P* values.

menses is in contrast to prior studies in which vulnerability to illness, failure, insufficient self-control, self-sacrifice, and unrelenting standards were the most-changed patterns.[7] However, aligning with our study, Ünsalver et al[7] reported that the defectiveness schema decreased between the 2 time periods. Three clinically relevant factors (monthly income, physical activity, and age) resulted in a lower prevalence of several schemas between days 1 and 15 of menses. Concerning monthly income, having a salary was significantly associated with a decrease in 3 schemas (defectiveness and shame, emotional deprivation, and fear of abandonment) from the first domain, which is linked to failures of secure attachment to others, affection, and stability[10]; 2 schemas (failure and dependence) from the second domain, which is linked to lack of confidence in establishing any task by themself[10]; 1 schema (subjugation) from the fourth domain that is linked to an overemphasis on meeting others' demands at the expense of their own needs[10]; and 1 schema (punitiveness) from the fifth domain that is linked to hypervigilance of possible negative events with overly rigid internalized rules.[10] University education usually requires a minimum amount of financial resources, thus the absence of income is more viable to stressful life events,[33] causing schema activation. Our results were consistent with previous literature, except for the absence of involvement of the third domain (linked to failure to follow norms and rules[10]). For instance, Ünal[34] reported that the amount of monthly income was negatively associated with the levels of all schema domains. Concerning age, older participants showed a decrease in punitiveness on day 15, possibly because people become more mature and start to easily forgive mistakes with age. Nevertheless, our findings were in contrast with previous studies that reported increased punitiveness with age,[35] while others have found that age influenced all schemas except punitiveness, enmeshment, self-sacrifice, and unrelenting standards.[36] Concerning physical activity, higher rates were significantly associated with increased self-sacrifice related to the other directedness domain. This tendency to engage in more physical activity could be explained by the excessive external focus of an individual on the desires of those around them, with the subsequent need of a particular physical strength to adapt to the imposed demands.[37] Our results were similar to those reported by Rankin et al,[38] in which the other directedness domain positively predicted an increase in physical activity dependence. However, in their study,[38] the impaired limits domain was also involved.

Furthermore, for prompt prevention and clinical management of EMS, it is important to recognize not only factors that may reduce the development of these patterns,

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Table 3. Repeated Measures ANOVA of the Maladaptive Schemas Among Participants to Assess Factors Associated With an Increase or Decrease in Schemas at Day 15

Variable	β	P[a]	95% CI		Partial Eta Squared
Domain 1: disconnection and rejection schema domain					
Model 1: emotional deprivation					
High vs no* monthly income	−9.56	**.015**	−17.12	−2.00	0.200
Intermediate vs no* monthly income	−6.06	**.004**	−9.98	−2.14	0.271
Anxiety	0.23	**.024**	0.03	0.43	0.175
Depression	0.16	**.033**	0.01	0.30	0.158
Model 2: abandonment					
Low vs no* monthly income	−4.91	**.029**	−9.28	−0.54	0.165
Model 3: defectiveness					
Low vs no* monthly income	−2.55	**.039**	−4.96	−0.14	0.148
Depression	0.16	**.04**	0.01	0.31	0.147
Domain 2: impaired autonomy/performance schema domain					
Model 4: failure					
Low vs no* monthly income	−2.49	**.033**	−4.77	−0.21	0.157
Depression	0.15	**.043**	0.01	0.29	0.143
Model 5: dependence					
Low vs no* monthly income	−2.70	**.039**	−5.25	−0.15	0.149
Depression	0.17	**.042**	0.01	0.32	0.144
Model 6: vulnerability					
Stress	0.32	**.017**	0.06	0.57	0.19
Domain 3: impaired limits schema domain					
Model 7: entitlement					
Anxiety	0.46	**.025**	0.06	0.85	0.173
Domain 4: other-directedness schema domain					
Model 8: subjugation					
Low vs no* monthly income	−3.82	**.018**	−6.93	−0.70	0.190
Depression	0.20	**.048**	0.002	0.39	0.137
Model 9: self-sacrifice					
Physical activity	0.13	**.03**	0.01	0.24	0.16
Anxiety	0.53	**.008**	0.15	0.90	0.23
Domain 5: overvigilance/inhibition schema domain					
Model 10: approval seeking					
Anxiety	0.42	**.013**	0.10	0.75	0.208
Model 11: unrelenting standards					
Stress	0.65	**.002**	0.25	1.04	0.297
Anxiety	0.55	**.005**	0.18	0.92	0.254
Model 12: negativity					
Stress	0.36	**.024**	0.05	0.66	0.175
Model 13: punitiveness					
Intermediate vs no* income	−7.88	**.014**	−14.02	−1.74	0.204
Stress	0.46	**.008**	0.13	0.79	0.234
Age	0.57	**.012**	0.14	1.00	0.212
Model 14: disconnection and rejection schema domain					
Low vs no* income	−13.58	**.021**	−24.92	−2.23	0.182
Intermediate vs no* income	−22.28	**.027**	−41.89	−2.67	0.168
Depression	0.75	**.038**	0.05	1.46	0.151
Model 15: impaired autonomy/performance schema domain					
Low vs no* income	−9.69	**.021**	−17.77	−1.60	0.183
Model 16: impaired limits schema domain					
Stress	0.81	**.012**	0.19	1.42	0.212
Anxiety	−0.66	**.027**	−1.23	−0.08	0.169
Model 17: other-directedness schema domain					
Intermediate vs no* income	−16.77	**.022**	−30.88	−2.66	0.180
Physical activity	0.23	**.038**	0.01	0.45	0.150
Anxiety	−0.92	**.013**	−1.63	−0.21	0.206
Model 18: overvigilance/inhibition schema domain					
Intermediate vs no* income	−21.17	**.038**	−41.04	−1.29	0.150
Stress	1.69	**.003**	0.62	2.75	0.282

[a]Numbers in bold indicate significant *P* values.
Abbreviation: ANOVA = analysis of variance.

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but also those that may activate them. Hence, we evaluated specific cognitive risk factors that might be associated with the psychopathology symptoms such as stress,[14] anxiety,[15] and depression.[16,18] On day 15, higher stress was mainly associated with schemas from the fifth domain (unrelenting standards, negativism, and punitiveness), wherein corresponding individuals are generally hypervigilant for possible negative events and hypercritical of themselves.[8] Our results are in contrast to those of Eberhart et al[39] who reported that self-sacrifice was the only schema to interact with stressful events,[40] whereas Cámara and Calvete[40] reported that emotional deprivation and abandonment were involved. In our prospective study, higher levels of anxiety were significantly associated with an increase in schemas that involve physical or psychological threats, which was consistent with the findings of Cámara and Calvete.[40] However, prior studies have reported that other schemas are moderated by anxiety, such as abandonment, dependence, and vulnerability to harm.[40] Furthermore, EMS have been consistently linked to the presence of depressive disorders given the established interaction between stressful events and depressive symptoms.[40] According to our findings, higher levels of depression were significantly associated with an increase in schemas that imply negativity and are usually risk factors for depression[40] (emotional deprivation, defectiveness, and failure), similar to what was reported in the literature.[41] However, in contrast to prior studies,[41] higher levels of depression also resulted in higher rates of dependence and subjugation. Thus, individuals will believe themselves to be incompetent in the absence of others, which leads to the need to surrender control to them.[10]

Clinical Implications

This study provides many valuable contributions to the literature. As expected, the stressful cognitive, emotional, behavioral, and physiologic changes[3,21] that women might face during the menstrual cycle, with the subsequent increase in stress, anxiety, and depression rates,[3] can strengthen and perpetuate preexisting latent EMS.[8,42] However, the research base investigating the relationship between these psychological disorders and EMS has grown immensely over the past decade, and several studies[42,43] showed that EMS are possible key factors in the genesis of depression, anxiety, panic disorder, social phobia, and other forms of psychopathology. Thus, the relationship is bidirectional, and EMS could act not only as outcomes of mental disorders but also as predictors of their development.[40] Based on our finding that higher rates of EMS are noted among women with stressful PMS and knowing that EMS are associated with symptom severity of chronic psychiatric conditions,[44] we hypothesized that better control of PMS might result in lower activation rates of these core beliefs with subsequent better control of depression and anxiety. By extrapolating our findings, we might also consider screening for EMS in young women during each routine health care visit given that initiating targeted schema therapy in eligible women will provide better long-term clinical outcomes.[8,43]

Limitations and Strengths

This study has some limitations that should be considered when interpreting the findings. First, the targeted population was based on young undergraduate university students from the community who might face higher stress rates while completing their education; thus, this study should be replicated in older adults to assess the generalizability of the findings. Information bias is possible since participants might overrate or underrate their symptoms. A selection bias was present due to the sampling technique used. Finally, evaluation of the parameters during only one menstrual cycle presents another limitation because this isolated evaluation might not reflect the patient's psychological baseline. It does not leave enough time for stressful events to occur or cognitive structures to change. Despite these limitations, our study has some strengths. Expanding on previous research conducted in countries with different cultural, social, and economic backgrounds, this is the first study on this topic to be conducted in Lebanon, a country that has been plagued for decades by many challenges and conflicts.[23] Our sample was based on female university students, given that this premenopausal age group has the highest risk of EMS activation following exposure to several psychosocial stressful life events.[45] We believe that our results have improved knowledge of EMS and their impact on premenstrual symptoms.

CONCLUSION

Although natural premenstrual symptoms do not cause any significant cognitive impairment in women,[1] they remain a prevalent health care issue that eventually imposes a debilitating burden on society if consistently affected by the activation of latent EMS. Moreover, age, physical activity, monthly income, depression, anxiety, stress, and even different days of the month were significantly involved in the activation of latent EMS. Potential treatment with schema therapy must be offered to eligible patients by experienced psychologists to minimize the apparent detriment caused by EMS to interpersonal relationships, social interactions, lifestyle, work performance, emotional well-being, and overall health-related quality of life. Finally, further studies evaluating the same parameters for 2 or 3 consecutive menstrual cycles might be of primary methodological importance.

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