Assessing Work Productivity Impairment in Premenstrual Syndrome (PMS) and Premenstrual Dysorphic Disorder (PMDD)

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ABSTRACT

OBJECTIVE: Premenstrual Syndrome (PMS) and Premenstrual Dysorphic Disorder (PMDD) can have significant impact on women's work productivity. The objective of this study was to assess the degree of productivity impairment associated with PMS and PMDD.

METHODS: Data were collected through an online survey of employed females aged 18-45 years (N=344), with some premenstrual complaints such as irritability, depression, headache, and abdominal bloating. Responses from the Work Productivity and Activity Impairment Questionnaire (WPAI) and the Work Limitations Questionnaire (WLQ) and its subscales (Time Management, Physical, Mental Interpersonal, and Output) were analyzed. The retrospective criteria of the American College of Obstetricians and Gynecologists (ACOG) and the DSM-IV-TR were used to identify women with PMS and PMDD, respectively. The study controlled for age using multivariate ANCOVA and compared the following groups: 1) women who did not meet criteria for PMS or PMDD (36.4%; 2) women who met the criteria for PMS but not PMDD (19.5%); and 3) women who met the criteria for PMDD (14.7%).

RESULTS: Multivariate ANCOVA showed significant differences across the three groups for the composite Productivity Loss of the WLQ and its subscales as well as for the WPAI (all p<.001). When compared to women without PMS or PMDD, the model estimated greater work impairment score for the PMDD group then for the PMS group. Post-hoc analysis revealed significant differences in scores between all groups for the WLQ Output scale (p<.05) except between PMS and PMDD for the WLQ Time Management scale. The WPAI: Work Impairment Activity Impairment score showed that measures assessing the work productivity are closely associated to the severity of premenstrual symptoms.

CONCLUSION: Presence of PMS and PMDD substantially impairs women's work productivity.

OBJECTIVES

- To evaluate the degree of work impairment associated with three differing level of severity in premenstrual symptoms: 1) women with no PMS or PMDD, 2) women with PMS but not PMDD, and 3) women with PMS and PMDD.

METHODS

Data Sources: An internet survey study including eligible participants of the U.S. female members of the Zoomerang panel 13-45 years old. Employed women with regular menstrual cycles for the past three months. Retrospectively reported at least one of the premenstrual symptoms from the American College of Obstetricians and Gynecologists (ACOG) 2000 diagnostic criteria for PMS

Survey Instruments: Premenstrual Symptoms Impact Survey (PMSIS)12,13, SF-12v2 Health Survey,14 Work Limitations Questionnaire (WLQ)15, Work Productivity and Activity Impairment Questionnaire: Specific Health Problem (WPAI)16,17,18

Dependent Variable: Composite Scale of the Work Limitations Questionnaire: Productivity Loss Scale

Analysis Procedures: Multivariate ANCOVA

RESULTS

Among 649 eligible women, 559 (88.2%) were white and the mean (SD) age was 32.4±7.8. PMSIS was moderately correlated with all productivity measures and their subscales, using WPAI and WLQ (Table 1). Multivariate ANCOVA results indicated a significant overall difference between the three groups differed by the severity level of premenstrual symptoms on all of the measures (Table 2).

- For the WLQ time management scale, a significant higher (worse) mean score was observed in the PMS and the PMDD groups, when compared to the non-PMS/PMDD group. No significant difference between the PMDD and PMS groups was observed.

- Similar to the WLQ time management scale, a significant higher (worse) mean score was observed on the WLQ physical scale in the PMS and the PMDD groups, when compared to the non-PMS/PMDD group. No significant difference between the PMDD and PMS groups was observed.

- For the WLQ mental interpersonal and output scales, and its productivity loss composite scale, and WPAI work and activity impairment, all comparisons were significant. Women who had PMS but not PMDD had significantly worse scores than women who had no PMS or PMDD; women with PMDD had the worst (highest) mean scores in all three groups.

- PMSIS showed a similar pattern of results to the productivity measures. All group comparisons were significant. Women with PMDD had the highest (most impact) score on PMSIS and women who did not meet either the PMS or the PMDD criteria had the lowest (least impact) score on PMSIS.

- With all measures, the effect size was moderate to large, indicating statistically as well as practically significant findings.

CONCLUSIONS

This is a patient-reported outcome study based on online internet survey. Only retrospective component of the ACOG and DSM-IV-TR diagnostic criteria were used for determining whether women were likely to have PMS or PMDD.

Symptom checklist was used for premenstrual symptom complaints.

REFERENCES