RELATIONSHIP BETWEEN MENSTRUAL DISORDERS AND POSTTRAUMATIC STRESS DISORDER (PTSD) IN JAPANESE HIGH SCHOOL STUDENTS 9 MONTHS AFTER THE GREAT EAST JAPAN EARTHQUAKE.

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Objective: Dysmenorrhea and premenstrual symptoms (PMS/PMDD) are the most common menstrual disorders during adolescence. On March 11, 2011, the Great East Japan Earthquake occurred and a massive tsunami smashed into the northeastern coast of Japan. Such catastrophic disasters cause tremendous damage, not only physically but also mentally. The purpose of this study was to determine the relationship between dysmenorrhea, PMS/PMDD and PTSD among Japanese adolescent girls 9 months after the Great East Japan Earthquake.

Methods: A school-based survey was conducted in December 2011 using a sample of female students who belong to two public high schools in Sendai, the largest city in northeastern Japan. We have been conducting the survey annually since 2009 to assess the prevalence and the impact of premenstrual symptoms among adolescent girls who went to these schools. These schools are located inland, far from the seashore, and were not damaged by the tsunami. We asked the girls their severity of menstrual pain and premenstrual symptoms. PTSD symptoms were assessed using the Impact of Event Scale-Revised (IES-R).

Results: We analyzed the data of 1,180 girls aged 15 to 18 years. The prevalence rate of moderate to severe PMS, PMDD and PTSD were 10.9%, 3.6% and 10.0% respectively. There was a statistically significant graded relationship between PMS status and PTSD status (p<0.01). The intensity of menstrual pain increased according to the comorbidity of PTSD (p<0.001). When we compare the difference of the two schools, the severity of PMS and PTSD in School B is significantly higher than in School A. During these three years, the rates of PMDD and moderate to severe PMS in School A were not changed, but significantly changed in School B.

Conclusion: This study showed a significant association between natural disaster-induced PTSD and the menstrual disorders such as dysmenorrhea and PMS/PMDD.