

Why is psychological counseling needed for AYA cancer patients to consider fertility preservation? A randomised controlled trial of the Oncofertility Psycho-Education and Couple Enrichment (O!PEACE) therapy in Japan

Authors: Tomoe Koizumi^{1,2}, Kouhei Sugimoto¹, and Nao Suzuki²

¹ International Center for Reproductive Medicine, Dokkyo Medical University Saitama Medical Center

² Department of Obstetrics and Gynecology, St. Marianna University School of Medicine

Background

Adolescent and young adult (AYA) patients with cancer display distress and potential psychological trauma symptoms after receiving a cancer diagnosis involving possible fertility loss. AYA patients experience conflict about fertility preservation, and many develop cancer-related posttraumatic stress symptoms (PTSS).¹

² Particularly, 44% of AYA patients with cancer report cancer-related PTSS at 12 months after a cancer diagnosis.¹ Patients with cancer-related distress are more likely to refuse adjuvant chemotherapy recommended by their oncologist³ and discontinue fertility treatments more than those without distress.⁴ These symptoms of posttraumatic stress disorder (PTSD) prevent childbearing after cancer treatment.⁵

Supportive psychological care for AYA patients with cancer is recommended globally. The American Society of Clinical Oncology revised Guideline of Fertility Preservation⁶ recommends that health care providers discuss oncofertility before cancer treatment and refer patients to psychological professionals if fertility-related concerns or anxiety arise. The Japan Society for Fertility Preservation⁷ has trained over 100 certified oncofertility-specialized psychologists in collaboration with the Japan Society for Reproductive Psychology since 2016 and has supported the various psychological needs for fertility at cancer diagnosis, after cancer treatment, and even if unsuccessful fertility treatment.

Many interventional studies focusing on decisional conflicts of fertility preservation disregard cancer-related PTSS. To the best of our knowledge, no interventional studies have examined the effectiveness of post-diagnosis psychological counseling regarding fertility preservation on cancer-related PTSS and other psychosocial aspects among AYA patients with cancer.

Summary

The aim of our study is to examine whether a psychological intervention can reduce psychiatric symptoms and improve stress coping and marital relationships for patients with breast cancer and their partners who consider fertility preservation.⁸ We created the “Oncofertility! Psycho-Education and Couple Enrichment (O!PEACE)” therapy for considering fertility preservation. This therapy is composed of two sessions. The first one included supportive psychotherapy and relaxation, psycho-education about cancer treatments and fertility, and shared decision-making regarding fertility preservation. The second session included solution-focused brief psychotherapy for couples' stress-coping against fertility preservation and cancer treatment, relaxation, assertive training for couple communication, and cognitive externalization for improving couples' resilience using an egg ball. These interventions are completed before cancer treatment.

This multicenter randomized controlled trial with non-masking, parallel two-group comparison enrolled women aged 20–39 years with early-stage breast cancer and their partners. They were randomly assigned to receive O!PEACE (37 couples) or usual care (37 couples). While the O!PEACE therapy group received two sessions of psycho-educational couple brief therapy prior to cancer treatment, the usual care group had no

therapy sessions. The primary endpoints were PTSS, symptoms of depression, and anxiety. Secondary endpoints were stress-coping strategies, resilience, and marital relationship.

As a result, women receiving O!PEACE therapy had significantly reduced “Impact of Event Scale-revised version for Japanese” (IES-R-J) scores ($P=.011$, $\eta_p^2=0.089$) using ANCOVA. For patients with IES-R-J scores at baseline ≥ 18.27 , O!PEACE therapy improved these scores when compared to usual care ($U=172.80$, $P=.027$, $r=0.258$); A >5 -point reduction was present in 59.3% and 30% of women in the O!PEACE therapy and usual-care groups, respectively.

For partners, O!PEACE therapy significantly improved stress-coping strategies (95% confidence interval [CI], -0.60 – 0.05 ; $P=.018$, $\eta_p^2=0.074$) and escape-avoidance marital communication (95% CI -0.33 – 0.08 ; $P=0.001$, $\eta_p^2=0.136$). Partners’ negative and avoidant behavior decreased significantly in “58.9%” of the O!PEACE compared with “31.4%” of the usual-care group. O!PEACE therapy significantly improved the partners’ support (95% CI 0.10 – 0.50 ; $P=.001$, $\eta_p^2=0.127$), the rate of receiving fertility preservation consultations, and knowledge levels. A higher consultation ratio for fertility preservation was found in the O!PEACE group than in the usual care group ($\chi^2(1)=5.29$, $P=.029$, *Cramer’s v*=5.12, $P=.030$). Overall, 45.4% and 20.5% of patients in the O!PEACE and usual-care groups, respectively, received fertility preservation consultations by fertility specialists.

Conclusion

O!PEACE psycho-educational therapy with only two pre-cancer treatment sessions can reduce cancer-related PTSS and improve the knowledge of oncofertility and marital relationships for young adult BC patients, and it can reduce the stress-coping strategies of giving up and blaming others, and escape-avoidance coping in marital communication for their partners. Consequently, O!PEACE couples were more likely to pursue fertility-preservation consultations. Couples may consider and decide on fertility preservation and cope with cancer-related PTSS with marital-supportive communication through O!PEACE psycho-educational therapy. Brief psycho-educational therapy before treatment—such as O!PEACE—may enhance couples’ decision-making around fertility preservation and bolster their resilience in facing cancer.

Now, Japanese government recommends that full-time “certified oncofertility navigators” and/or “certified oncofertility specialized psychologists” always provide psychosocial care for fertility preservation in the certified facilities. Initially, reproductive urologists and reproductive endocrinologists conduct consultations regarding fertility preservation. If patients express distress or concerns during these discussions, the medical team refers them to the oncofertility specialized psychologist.

References

1. Kwak M, Zebrack BJ, Meeske KA, et al. Prevalence and predictors of post-traumatic stress symptoms in adolescent and young adult cancer survivors: a 1-year follow-up study. *Psychooncology*. 2013;22:1798-1806.
2. Smrke A, Leung B, Srikanthan A, McDonald M, Bates A, Ho C. Distinct features of psychosocial distress of adolescents and young adults with cancer compared to adults at diagnosis: patient-reported domains of concern. *J Adolesc Young Adult Oncol*. 2020;9:540-545.
3. Colleoni M, Mandala M, Peruzzotti G, Robertson C, Bredart A, Goldhirsch A. Depression and degree of acceptance of adjuvant cytotoxic drugs. *Lancet*. 2000;356:1326-1327.
4. Koizumi T, Nara K, Hashimoto T, et al. Influence of negative emotional expressions on the outcomes of shared decision making during oncofertility consultations in Japan. *J Adolesc Young Adult Oncol*. 2018;7:504-508.
5. Canada AL, Schover LR. The psychosocial impact of interrupted childbearing in long-term female cancer



ISFP – Newsletter

- survivors. *Psychooncol.* 2012;21:134-143.
6. Loren AW, Mangu PB, Beck LN, et al. Fertility preservation for patients with cancer: American Society of Clinical Oncology clinical practice guideline update. *J Clin Oncol.* 2013;31:2500-2510.
 7. Japan Society of Clinical Oncology. JSCO clinical practice guidelines 2017 for fertility preservation in childhood, adolescent and young adult cancer patients. JSCO clinical practice guidelines. Tokyo, Japan: KANEHARA & CO., LTD., 2017.
 8. Koizumi T, Sugishita Y, Suzuki-Takahashi Y, et al. Oncofertility-related psycho-educational therapy for young adult patients with breast cancer and their partners: Randomized controlled trial. *Cancer.* Aug 15 2023;129(16):2568-2580. doi:10.1002/cncr.34796