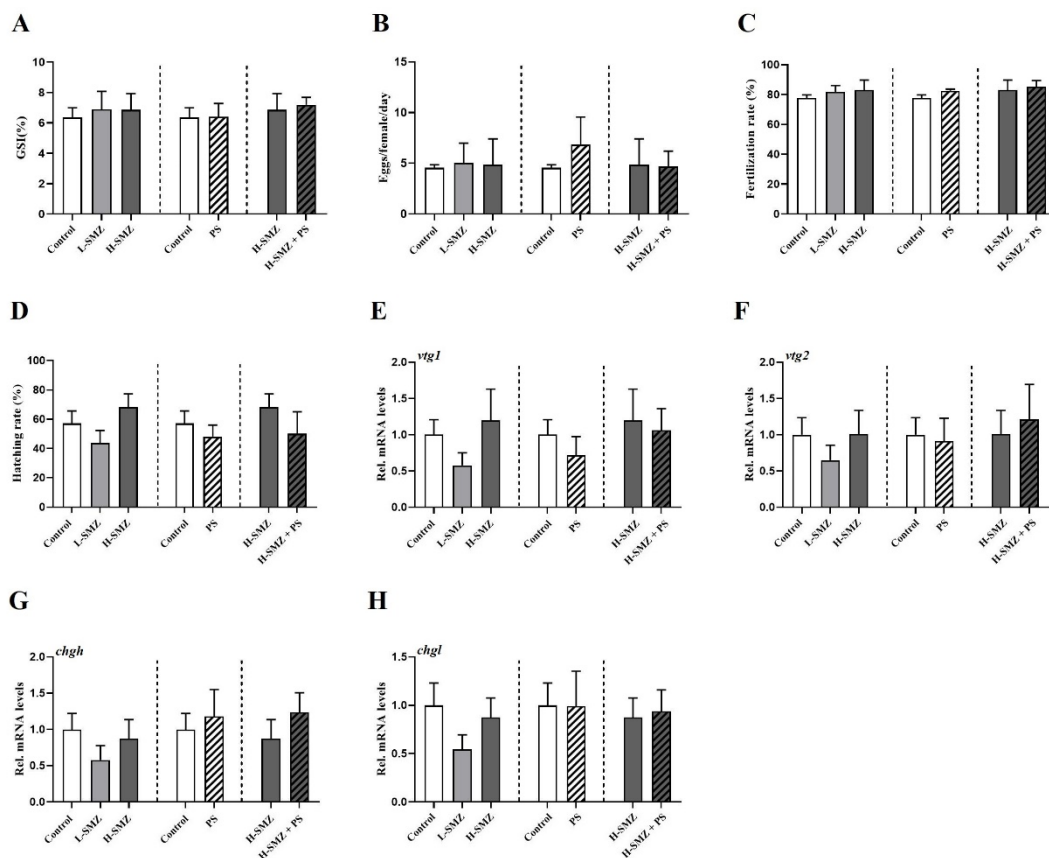


Supplementary information:

Figure S1. Effects of PS, SMZ or their binary mixture on the reproduction of female marine medaka. The GSI value ($n \geq 6$) (A), egg production ($n = 3$) (B), fertilization rate ($n = 3$) (C), hatching rate ($n = 3$) (D), and transcriptional expression levels of *vtg1* (E), *vtg2* (F), *chgh* (G) and *chgl* in the liver ($n \geq 6$) (H) are measured. One-way ANOVA analysis followed by Fisher's least significant difference (LSD) post hoc test were conducted among the control, L-SMZ and H-SMZ groups. Two independent Student's t-test analyses were conducted (Control vs PS; H-SMZ vs H-SMZ+PS). No significant difference was observed.



The supplementary information is available online at [https:// doi.org/10.1007/s13131-024-2289-8](https://doi.org/10.1007/s13131-024-2289-8) and <http://www.aosocean.com/>. The supplementary information is published as submitted, without typesetting or editing. The responsibility for scientific accuracy and content remains entirely with the authors.