

Supplementary Material 3

Calculation of Minimum Detectable Effect Size

Method

We calculated the minimum detectable effect size for the hypothesized buffering effect under reasonable assumptions by conducting simulations with the InteractionPowerR package (Baranger et al., 2023). In particular, an attenuated interaction pattern was simulated in accordance with the proposed hypothesis, informed by correlations from previous literature (Petrova et al., 2021). It was expected for social support and SES to be both associated with worse mental health (main effects), in addition to an interaction, such that SES would have no effect under high levels of social support and reach its strongest effect under low levels of social support (Baranger et al., 2023). We assumed $\alpha = .05$, instrument reliabilities of .95, and the following correlations: social support and mental health of -0.40 , SES and mental health of $-.20$, and social support and SES of $.15$.

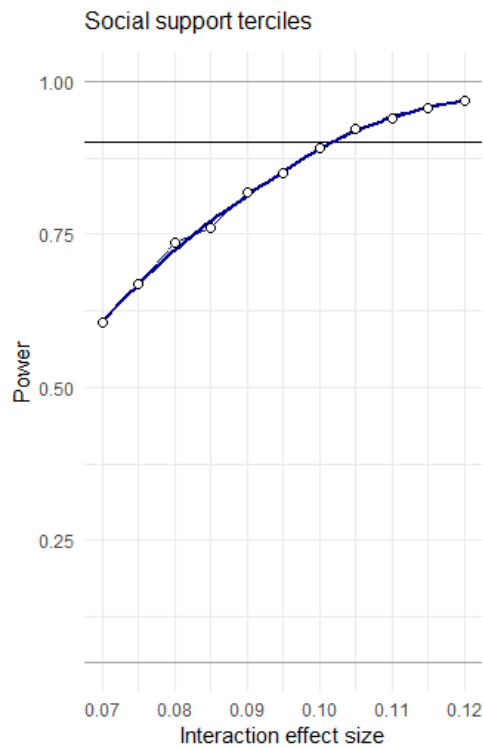
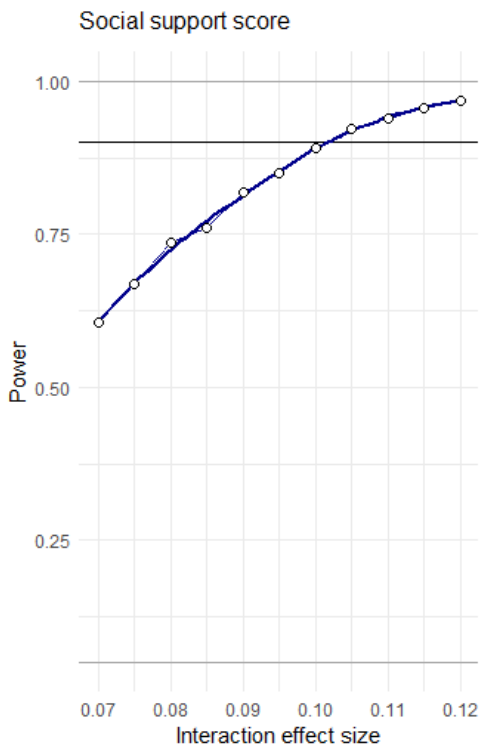
Results

Results based on 10,000 simulations for 11 different effect sizes showed that with the smallest available sample size ($n = 980$ in HESUS), interaction effects as small as 0.10 could be detected with excellent statistical power, for both the continuous social support scores (90%) and social support divided in terciles (88%) (see R code on OSF: <https://doi.org/10.17605/OSF.IO/69BRM>).

Supplemental materials for Petrova et al.
 “The Stress-Buffering Effect of Social Support on Socio-Economic Mental Health Disparities among Cancer Survivors”
 (Psychosocial Intervention)

Social Support Measurement

Continuous score		Terciles	
Interaction effect size	Power	Interaction effect size	Power
.070	.63	.070	.63
.075	.67	.075	.67
.080	.71	.080	.73
.085	.80	.085	.77
.090	.81	.090	.83
.095	.87	.095	.87
.100	.90	.100	.88
.105	.91	.105	.92
.110	.94	.110	.94
.115	.95	.115	.95
.120	.97	.120	.97



References

Baranger, D. A. A., Finsaas, M. C., Goldstein, B. L., Vize, C. E., Lynam, D. R., & Olino, T. M.

(2023). Tutorial: Power analyses for interaction effects in cross-sectional regressions.

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Retamero, R., & Sánchez, M.-J. (2021). Physical comorbidities as a marker for high risk of psychological distress in cancer patients. *Psycho-Oncology*. Scopus.

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