

Hormonal Birth Control Use and the Association Between Thwarted Belongingness and Depressive Symptoms



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Background

Feeling disconnected from others, often referred to as thwarted belongingness, is a key part of Thomas Joiner's Interpersonal Theory of Suicide. When people feel like they do not truly belong or lack meaningful social connections, they are more likely to experience depressive symptoms. At the same time, research examining the relationship between hormonal birth control and depression has produced mixed findings. Some studies suggest hormonal contraception may influence mood, while others find little to no relationship. Because both social connectedness and hormonal factors may play a role in mental health, it is important to better understand how these variables may interact.

Methods

Participants were 66 biologically female individuals recruited from a community sample. Participants completed self-report measures assessing thwarted belongingness and depressive symptoms using the Patient Health Questionnaire (PHQ-9). Participants also indicated whether they were currently using hormonal birth control. To examine whether birth control use influenced the relationship between thwarted belongingness and depressive symptoms, a moderation analysis was conducted.

Hypothesis

It was hypothesized that participants using hormonal birth control would show a weaker relationship between thwarted belongingness and depressive symptoms, along with lower overall depressive symptom severity compared to those not using hormonal birth control.

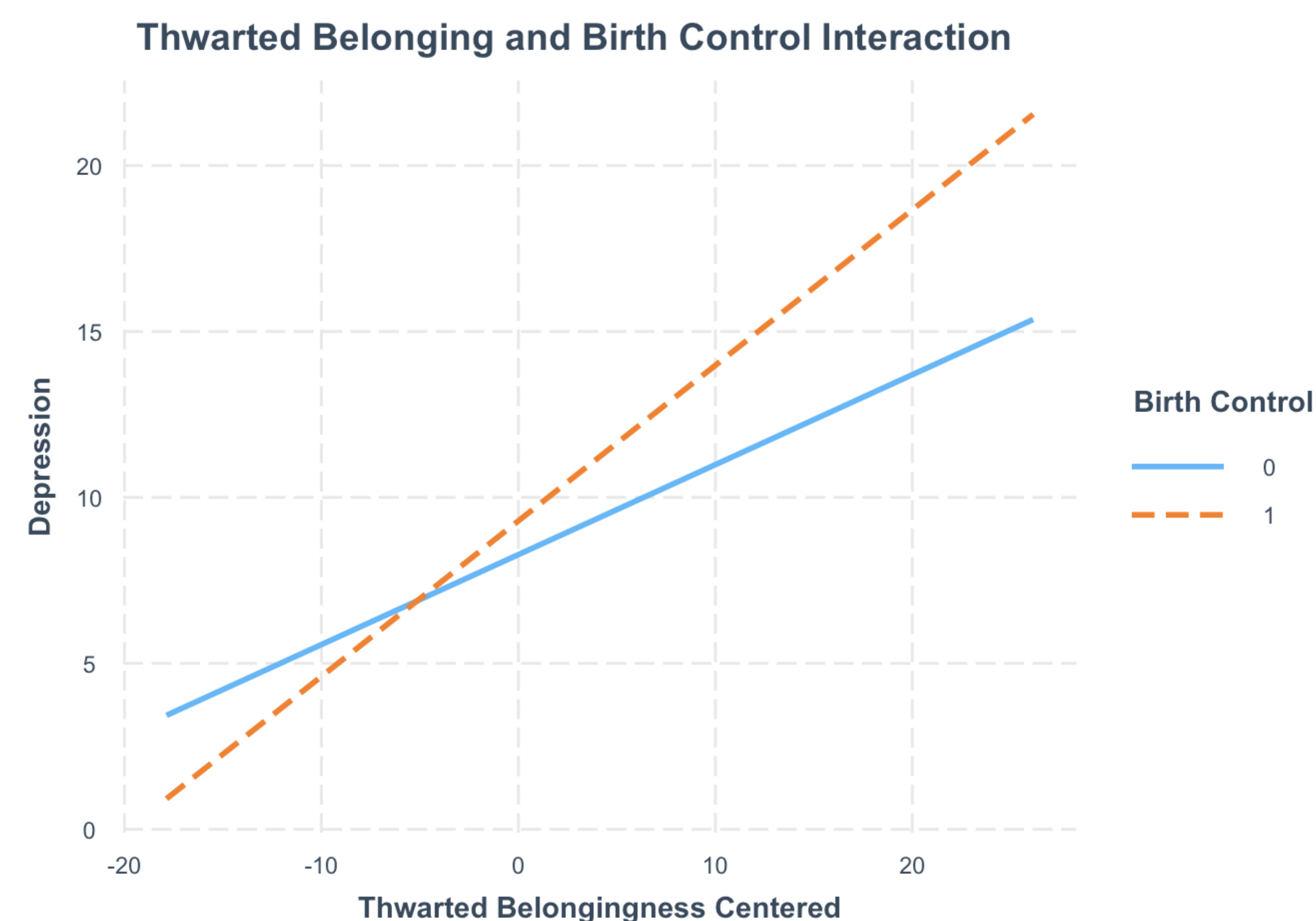


Figure 1 - Exploratory interaction between thwarted belongingness and hormonal birth control use

Sample Characteristics

- Depressive symptoms (PHQ-9)
 - M = 8.94, SD = 6.97
- Thwarted Belongingness (INQ-TB)
 - M = 17.86, SD = 12.98
- Sexual Orientation
 - Heterosexual: 51.5%
 - Bisexual: 34.9%
- Race
 - White: 69.7%
 - Asian: 18.2%
 - Black/African American: 6.1%
 - Biracial/Multiracial: 6.1%
- Ethnicity
 - Hispanic/Latinx: 16.7%
- Birth control use
 - N = 66 biologically female participants
 - Mean age: 21.57 years (SD = 3.88)
 - Users: 27 (41%)
 - Non-users: 38 (58%)

References

- Katherine M. Keyes, Keely Cheslack-Postava, Carolyn Westhoff, Christine M. Heim, Michelle Haloosim, Kate Walsh, Karestan Koenen. Association of Hormonal Contraceptive Use With Reduced Levels of Depressive Symptoms: A National Study of Sexually Active Women in the United States. *American Journal of Epidemiology*, Volume 178, Issue 9, 1 November 2013, Pages 1378-1388. <https://doi.org/10.1093/aje/kwt188>
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Results

Thwarted belongingness was significantly associated with depressive symptoms among participants. Among individuals who did not report using hormonal birth control, higher levels of thwarted belongingness predicted higher depressive symptoms ($b = 0.27, p < .001$). A similar relationship was found among individuals who reported using hormonal birth control ($b = 0.47, p < .001$). The interaction between thwarted belongingness and hormonal birth control use approached statistical significance ($b = 0.20, p = .055$). While the moderation effect did not reach conventional significance levels, the pattern suggests that the association between thwarted belongingness and depressive symptoms may be somewhat stronger among birth control users.

Discussion

These findings suggest that feeling socially disconnected is strongly related to depressive symptoms regardless of hormonal birth control use. Although hormonal birth control did not significantly change this relationship in the present sample, the pattern of results raises interesting questions about whether hormonal factors may influence how interpersonal stress relates to depressive symptoms. Additional research with larger samples may help clarify these potential effects.