



# Assessing for Potential Mediating Factors Between Anxiety and Externalizing Behaviors

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## Abstract

Using data from a minority stress study sample consisting of 194 participants, we analyzed the different potential mediating factors between anxiety and externalizing behaviors. The mediators that were tested via survey data were emotional invalidation, thwarted belongingness, and perceived burdensomeness. Background on current research and definitions of the variables are introduced.

Additionally, the specificities of each survey's function and importance are outlined. Mediation analysis of the data supports that emotional invalidation does not mediate the association between anxiety and externalizing behavior ( $p > .05$ ). However, both thwarted belongingness ( $b = .48, p < .001$ ) and perceived burdensomeness ( $b = .47, p = .25$ ) both present a full mediating effect between anxiety and externalizing behaviors. Although a cross-sectional analysis cannot assert a causal relationship, this mediation supports that anxiety and externalizing behavior may not occur simultaneously without the presence of thwarted belongingness or perceived burdensomeness. The implications of this data could be applied in many settings including suicide research, personal and family therapy, crime research, and research on the mental health of minority populations.

## Background

The relationships between anxiety, externalizing behaviors, and their mediating factors have been studied across multiple populations; perhaps the most prevalent is children. For example, a study published by the American Journal of Orthopsychiatry analyzed data from a sample of mother-child dyads in which the children were diagnosed with both anxiety and externalizing disorders. They found that children with co-occurring diagnoses were more likely to have mothers with anxiety disorders. Additionally, they are more likely to suffer academically and perform worse on intelligence tests than children without these comorbidities (Yoo et al., 2009). In another study that explored a sample of children with both Autism Spectrum Disorder (ASD) and comorbid anxiety and OCD diagnosis, researchers found that higher levels of externalizing behaviors predicted suicidal ideation in this population. Additionally, they found that children with ASD and comorbid anxiety and OCD had higher levels of suicidal ideation if their levels of perceived loneliness were also high (Ariza et al., 2021).

Research has also been done using some of our potential mediating factors. A study published in the Archives of Suicide Research examined potential mediations between anxiety and suicidal ideation in adolescents. They found that depressive symptoms and perceived burdensomeness delineated a significant mediating relationship between anxiety and suicidal ideation within this adolescent population (Hill et al., 2018). Evidently, research in this field could be extremely helpful in studying child development, potential therapeutic tactics, suicide risk, etc.

## Results

Based on the mediation analysis, no mediation was found between anxiety, emotional invalidation, and externalizing behaviors. A full mediating effect was found between anxiety, thwarted belongingness, and externalizing behaviors. Finally, another full mediation was found between anxiety, perceived burdensomeness and externalizing behaviors. To simplify, the data collected supports that the presence of thwarted belongingness and perceived burdensomeness respectively influence the emergence of externalizing behaviors in an individual with anxiety. The graphics below demonstrate this relationship. Since this is a cross-sectional study, causation cannot be claimed. The lines instead of arrows for a, b, and c' denote this.

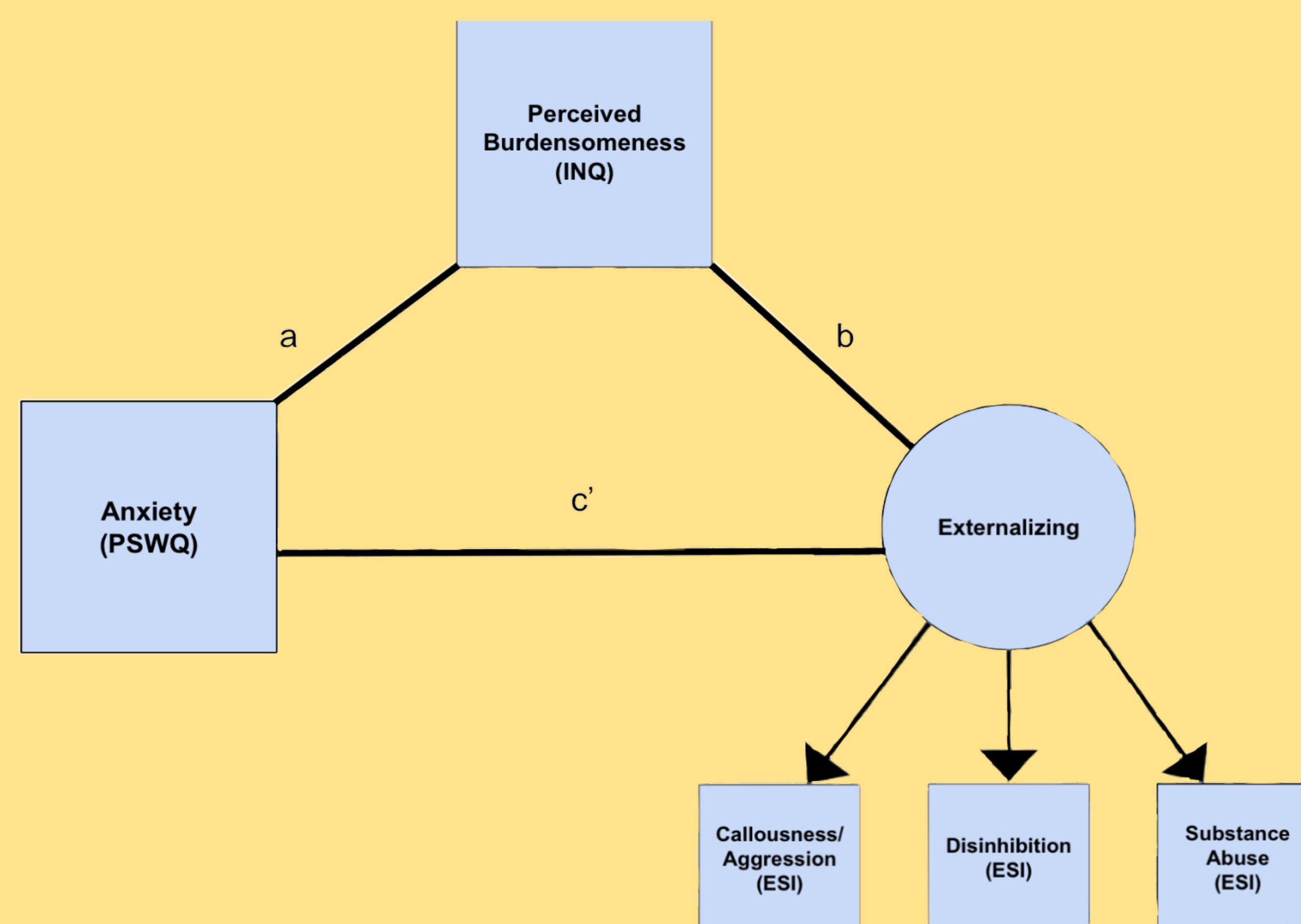
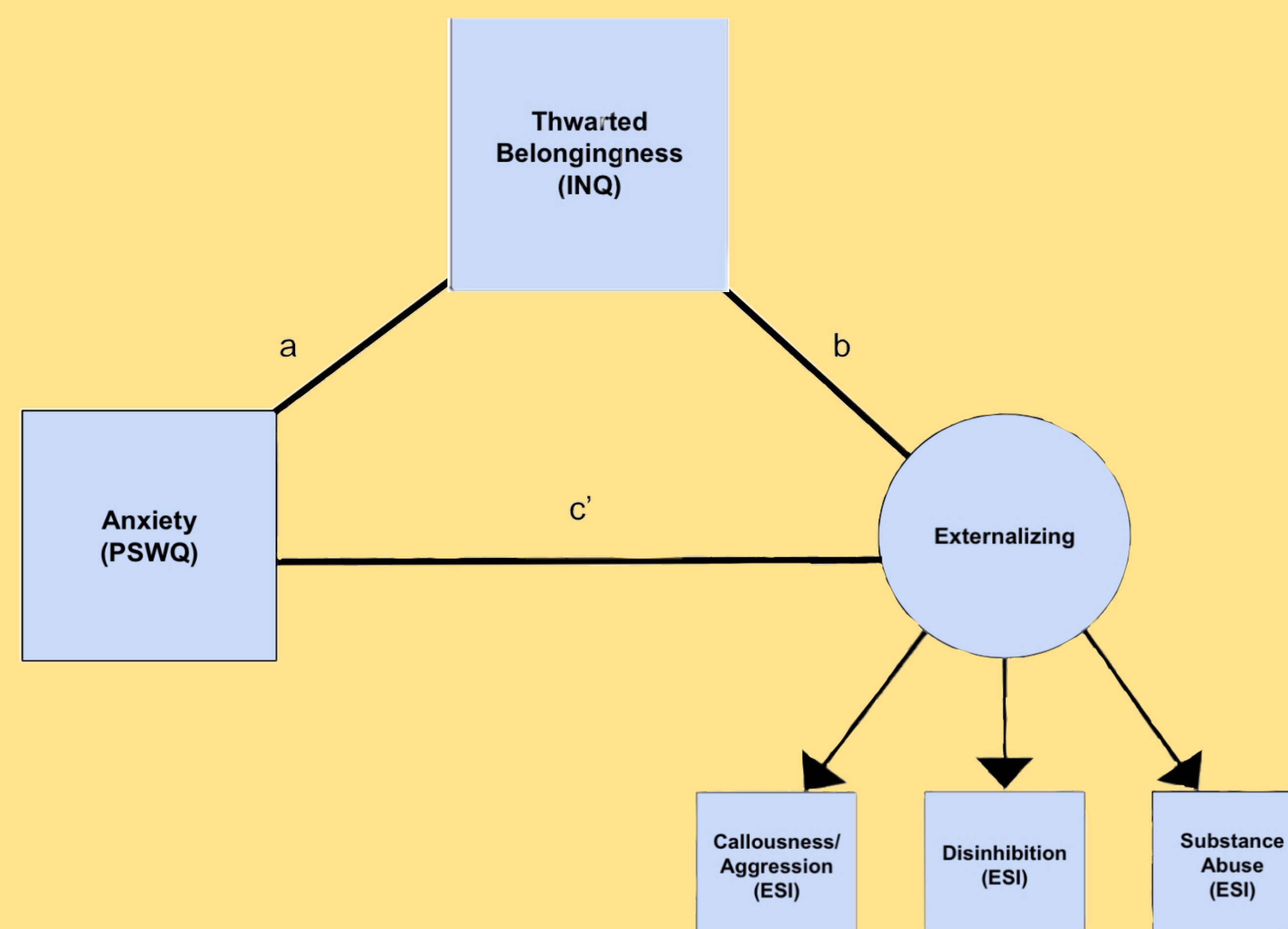


Fig. 1

Fig. 2



## Methods

The variables of anxiety, emotional invalidation, thwarted belongingness, and perceived burdensomeness that were being accounted for during this study each have multiple empirically supported questionnaires that evaluate for their criteria. Thus, participant data was solely gathered using Qualtrics surveys. First, general demographic information was taken, including age, sex, gender, race, etc. To measure levels of worry, the most prominent criteria in General Anxiety Disorder (GAD) the Penn State Worry Questionnaire (PSWQ) was used (Meyer et al., 1990). The Perceived Invalidation of Emotion Scale (PIES) was used to evaluate the level to which participants feel invalidated emotionally (Zielinski, 2016). To analyze both perceived burdensomeness and thwarted belongingness, the Interpersonal Needs Questionnaire (INQ) was used (Orden et al., 2011). Finally, propensity for externalizing behaviors was measured using the Externalizing Spectrum Inventory (ESI). This questionnaire tests for qualities of aggression, disinhibition, and substance abuse (Patrick et al., 2013).

Once all survey data was collected, statistical analysis on the set could begin. To analyze the mediating relationships between the variables being tested, the primary relationship between anxiety and externalizing behaviors was first accounted for. Relationships between the variables were measured using scores from the survey data and their trends. After this, a separate mediation model was created for each potential mediator being tested—those being Emotional Invalidation, Perceived Burdensomeness, and Thwarted Belongingness. The values and relationships found were used to create mediation diagrams and evaluate the hypothesis in the Results section.

## References

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