

Background Information on the Scales Used for the 2023-2024 Psi Beta National Research Project

This year's National Research Project focused on the associations between honor society participation and various student characteristics and outcomes. The information below can help you better understand your individual results on the scales as well as the general study findings.

Honor Society Engagement

To measure engagement with your honor society, we created our own set of questions, as no scales to measure this construct currently exist. The scale consists of two questions focused on your specific honor society participation, as well as 8 items that measure the extent of your engagement. All responses are rated on a 5-point scale, with higher scores indicating greater engagement.

School Engagement Scale

The Psychological Sense of School Membership is an 18-item scale with a response range from 1-5. It is intended to measure a student's feelings of belonging to their academic institution. A feeling of connection to one's school has been shown to increase academic motivation and to be somewhat related to academic outcomes, such as grades. The average score on this scale is 3.84.

Five of the items on the scale are reverse-coded, which means that the direction of response is flipped. On a standard item, a higher rating suggests a stronger feeling of belongingness, but, on reverse-coded items, a higher rating would indicate a lower feeling of belongingness. When we analyze the data, we take this into account by reversing the scale (a "2" would become a "4", for example).

Goodenow, C. S. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools, 30*, 79-90.

[https://doi.org/10.1002/1520-6807\(199301\)30:1%3C79::AID-PITS2310300113%3E3.0.CO;2-X](https://doi.org/10.1002/1520-6807(199301)30:1%3C79::AID-PITS2310300113%3E3.0.CO;2-X)

Belongingness

The Need to Belong is a psychological construct focused on the extent to which a person needs to be accepted and feel they are a member of a social group. Need to Belong is positively associated with extraversion, agreeableness, and value placed on interpersonal relationships. It is also associated with strong emotional reactions to rejection and the personality characteristic of neuroticism.

In this study, we measure Need to Belong using a 10-item scale, with 1-5 response options. For seven of the items, a higher score indicates a stronger Need to Belong, while, for three of the

items, a higher score indicates a weaker Need to Belong. Scores for each item are summed to get a total Need to Belong score (range: 10-50). In the original studies using this scale, average scores for each sample tended to fall in the low 30s.

Leary, M. R., Kelly, K. M., Cottrell, C. A., & Schreindorfer, L. S. (2013). Construct validity of the need to belong scale: Mapping the nomological network. *Journal of Personality Assessment, 95*(6), 610-624. <https://doi.org/10.1080/00223891.2013.819511>

Academic Self-Efficacy

Academic self-efficacy is the belief in one's own ability to achieve academic goals. To measure this idea, we used the 11-item Self-Efficacy for Self-Regulated Learning scale. This is a subscale taken from the Children's Multidimensional Self-Efficacy Scales (Bandura, 1989a). Participants respond using a 7-point Likert scale, with higher ratings on each item associated with higher levels of self-efficacy.

In the original study of this subscale, average ratings varied between 3.49 and 5.34 on individual items, with an average response of 4.53 across items. In previous research, academic self-efficacy has been shown to correlate with grade goals and belief in ability to achieve in various subject areas.

Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal, 29*(3), 663-676. <https://doi.org/10.3102/00028312029003663>

Sense of Purpose and Meaning

The Claremont Purpose Scale (CPS) is a 12-item scale with a 1-5 response range. It is intended to be used with young adults and focuses on three of the components of a sense of purpose: goal-directedness, personal meaning, and a beyond-the-self orientation. Higher scores on each question indicate a greater sense of purpose with an average of 3.50.

Scores on the CPS have been found to positively correlate with purpose in life, life satisfaction, openness, wisdom, and empathetic concern, while being negatively associated with depression.

Bronk, K. C., Riches, B. R., & Mangan, S. A. (2018). Claremont Purpose Scale: A Measure that Assesses the Three Dimensions of Purpose among Adolescents. *Research in Human Development, 15*(2), 101-117. <https://doi.org/10.1080/15427609.2018.1441577>

Grit

Grit is a newer idea in the psychological literature that focuses on an individual's perseverance and passion for pursuing long-term goals. Research has found that higher levels of Grit are more

closely associated with goal achievement than is an individual's talent (Duckworth et al., 2007). Higher scores indicate more Grit with an average response of 3.2 - 3.7 from the original study.

The original Grit Scale included 12-items, measured on a 5-point scale. In this study, we are using the newer, 8-item Short Grit Scale (Grit-S). This scale is not only shorter but may actually be a better measure of the Grit construct. The items on the scale measure two sub-characteristics of Grit: consistency of interest and perseverance of effort. For items that measure consistency of interest, a higher score is associated with a lower Grit score (in other words, these are reverse-coded). For items that measure perseverance of effort, a higher score is associated with a higher grit score.

Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT-S). *Journal of Personality Assessment*, *91*(2), 166-174.
<https://doi.org/10.1080/00223890802634290>

Happiness

Global subjective happiness is how happy you feel you are, in general. We assessed global subjective happiness using a 4-item measure with a 7-point response scale. For the first three items, a higher score would be associated with a higher level of happiness, while responses to the last item are reverse-coded (a higher score means less happiness). After reversing the last item, an average score is calculated to find a person's happiness score. Higher scores indicated greater happiness. In the original study, various samples had average scores between 4.63 and 5.62.

Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, *46*, 137-155.
<https://doi.org/10.1023/A:1006824100041>

Loneliness

In this study, we used the 8-item UCLA Loneliness Scale (ULS-8). This scale, which was preceded by a 20-item and 4-item version of the measurement, maintains the validity and reliability of the original 20-item scale better than the 4-item version, while making it easier and more efficient to complete. Participants respond on a 4-point scale, and two of the items are reverse-coded.

In the original research using this scale, participants had an average total score of 11.33 (score ranges from 8-32). As you can likely guess, higher levels of loneliness are correlated with more negative psychological feelings and outcomes.

Hays, R. D., & DiMatteo, M. R. (1987). A short-form measure of loneliness. *Journal of Personality Assessment*, *51*(1), 69-81. https://doi.org/10.1207/s15327752jpa5101_6