Hazing in College Student Organizations:

Examining Hazing Experiences and New Member Stress Related to Student Well-being and Belonging

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Executive Summary

Hazing is prevalent within college student organizations, as up to half of college student organization new members experience hazing (Allan & Madden, 2008; Allan et al., 2019), potentially leading to physical and psychological harm (Finkel, 2002, Nuwer, 2018). Yet, no validated scale exists to measure a college student's experience with hazing during their time as organizational new members, or the stress caused by these experiences. Relying on survey data collected from 731 student organization members from three large public universities across the United States during the fall 2024 and spring 2025 semesters, the purpose of our study was to develop and validate the College Student Organization New Member Hazing Experiences Scale (NMHES; hazing experiences) and the New Member Experience Stress Scale (NMESS; new member stress). In addition, we examined the relationship between hazing experiences and stress and student well-being and belonging.

Key Findings

- We developed and validated the 31-item NMHES, as well as scales to measure new member positive experiences (8 items) and new member cohesive experiences (5 items).
- We developed and validated the 14-item NMESS to measure the overall stress students feel associated with their new member experiences.
- Our findings also suggest that hazing experiences during the new member process are negatively related to members' mental health, self-esteem, and campus sense of belonging.
- We found that new member stress mediates the relationships between hazing experiences and mental health, self-esteem and campus sense of belonging, indicating that this stress is a more powerful predictor of these concerning outcomes than experiencing hazing alone.
- Positive new member experiences are positively associated with mental health, self-esteem, and campus sense of belonging.

Implications for Practice and Policy

Student affairs practitioners may be able to use our findings to:

- Compare student organization members' experiences with hazing between individuals, organizations and institutions that may help practitioners make more informed decisions related to policies and interventions.
- Examine students' others experiences as organization members, including those that promote cohesion or are generally positive.
- Rethink interventions that make broad causal accusations about the negative impacts of hazing. Participants may dismiss these well-intended statements because they do not align with their new member experiences. Instead, practitioners may want to focus on the detrimental effects of new member stress or acknowledge the benefits of positive new member experiences.
- Design hazing prevention programs or hazing definitions in policy documents that avoid using extreme example of hazing, as most new members likely do not experience these practices.

Objectives or Purposes

Hazing is prevalent within college student organizations, as up to half of college student organization new members experience hazing (Allan & Madden, 2008; Allan et al., 2019), potentially leading to physical and psychological harm (Finkel, 2002, Nuwer, 2018). Yet, no validated scale exists to measure a college student's experience with hazing during their time as organizational new members, or the stress caused by these experiences.

One of the challenges in measuring hazing is the cognitive load for members to recall the frequency of experiences. In other words, respondents find it difficult to distinguish between having too many behavioral frequency response categories and the ambiguous wording in response options for survey items (e.g., 0 = Never; 5=Often/Frequently; Blair & Burton, 1987). However, providing too few response options also creates challenges to measure hazing experiences, as it reduces the variance needed for typical methods to validate scales like exploratory factor analysis and confirmatory factor analysis, especially for items which may not actually occur at all that frequently. Rasch Analysis may provide the best approach to examine the validity and reliability of surveys in higher education that measure infrequent experiences, such as hazing. This form of analysis is used more frequently in other disciplines, such as business (see Hergesell, 2022) and health sciences (see Zelinski & Gilewski, 2004), and should be used more in education research.

The purpose of our study was to develop and validate the College Student Organization New Member Hazing Experiences Scale (NMHES; hazing experiences) and the New Member Experience Stress Scale (NMESS; new member stress). In addition, we examined the relationship between hazing experiences and stress and student well-being and belonging. The research questions for our study were:

RQ1: To what extent does the NMHES reliably measure student hazing experiences, and does the NMESS measure the stress associated with these experiences in a multi-institutional sample?

RQ2: To what extent are hazing experiences related to indicators of well-being, including mental health, self-esteem and sense of belonging?

RQ3: To what extent does the new member stress mediate the relationship between hazing experiences and indicators of well-being?

Conceptual Framework

A challenge in advancing the scholarship on hazing is that there is a lack of consensus on a definition for this term. While scholars like Hoover and Pollard (1999; 2000) and Kowalski et al. (2021) have advanced their own definitions, these definitions are often broad and difficult to operationalize. For example, Hoover and Pollard defined hazing as "any activity expected of someone joining or participating in a group (such as a student club, organization, or team) that humiliates, degrades, abuses, or endangers regardless of a person's willingness to participate" (p. 8). Instead, we rely on Cimino's (2017) definition of hazing:

> non-accidental, costly aspects of group induction activities that: a) do not appear to be group-relevant assessments/preparations, or b) appear excessive in their application.

> Group induction activities are those tasks formally or informally required to obtain membership or participatory legitimacy for new or prospective members. (p. 135)

As argued by Cimino (2017), his "stricter" hazing definition is less ambiguous and narrower in scope than prior definitions. For example, new members may engage in unpleasant activities while being inducted into their organizations that are also aspects of veteran members' experiences in the group and relevant to the group's purposes (e.g., running laps during track practice).

While Cimino's (2017) definition is less ambiguous than others, the "non-accidental, costly aspects of group induction activities" (p. 135) - the hazing experiences endured by new members of college student organizations - have yet to be clearly classified by scholars beyond theoretical conceptualizations. These theoretical classifications are often based on scholars' perceptions of outcomes associated with hazing or members' motivations to perpetrate these behaviors (e.g., Allan et al., 2020). For example, Allan et al. (2020) noted that hazing is often framed by its association with physical or emotional harm (Allan & Madden, 2008), or as a mechanism for gatekeeping, promoting social dominance, or fostering group solidarity (Cimino, 2011; 2017). Instead of classifying hazing based on the associated outcomes or members' motivations, the scholarship on hazing can be advanced by focusing specifically on the hazing experiences.

Literature Review

Hazing persists in organizations despite the implementation of hazing prevention practices and policies (Biddix et al., 2024). Scholars like Cimino (2011) and McCreary and Schutts (2019) have argued that hazing persists because members believe that it fosters group solidarity, aim to establish social dominance and exert power over new members, and hope to only retain new members who are loyal to each other and the organization. Organization members also implement tactics intended to socialize new members to adopt their values, norms and behavior (Van Maanen & Schein, 1979). In particular, hazing could serve to force new members to divest from their own values, norms and practices (Mawritz et al., 2022). Hazing may persist because members believe it achieves desired organizational outcomes.

Despite the negative outcomes and public concern associated with hazing, no validated scale exists to measure a college student's experience with hazing during their time as organizational new members, or the stress associated with these experiences. Scholars interested in college students often rely on unvalidated measures that ask participants to report if they experienced specific behaviors as new members deemed to be hazing by the researcher (e.g., Allan et al., 2019; Campo et al, 2005), or validated measures that examine a student's motivation to engage in hazing (McCreary & Schutts, 2019). The lack of a measure of this construct prevents thorough examinations of the effects of hazing and the associated stress on college students or the identification of predictors that make them susceptible to these behaviors. Efforts to develop and validate measures of hazing are not unfounded, as Mawritz et al. (2022) did so to examine hazing in the workplace.

One challenge in validating a hazing experiences measure is the cognitive load of members to recall the frequency of experiences (Blair & Burton, 1987). Specific to hazing, participants ability to recall experiences may be further limited by cognitive dissonance, as members shift from

experiencing hazing to perpetrating these behaviors (Kowalski et al., 2021). Self-reported ratings scale responses are also affected by many forms of response bias (Zile-Tamsen, 2017), and sensitive topics like hazing are particularly prone to social desirability bias (Cimino et al., 2019). Rasch Analysis may provide the best approach to examine the validity and reliability of surveys in higher education that measure infrequent experiences and other ratings scales in higher education research (Zile-Tamsen, 2017).

Methodology

Upon securing IRB approval, we collected survey data from undergraduate student organization members enrolled at three large public universities across the United States during the fall 2024 and spring 2025 semesters. Institutional recruitment consisted of using the research team's current network to enlist campus participation. After securing institutional participation, we emailed individual survey links to 31,970 undergraduates of all class years inviting them to participate in the online survey; 1,235 students responded, yielding an overall response rate of 3.9%. After data cleaning, which removed participants who did not complete at least 80% of the survey, a final sample of 731 respondents remained (a 59.2% usable data rate). Please see Table 1 for the demographic information about the sample.

Respondents first selected the types of organizations in which they were involved, before selecting one organization type in which they were most involved (see Table 2 for the breakdown of student org involvement). The survey then asked respondents to rate how often [0=Never, 1= Sometimes (once or twice), 2= Often (3 times or more)] they experienced certain behaviors within that organization during their first semester of joining. We presented respondents with 69 items related to their new member experience, which were developed with expert review to span the full range of possible hazing behaviors (see DeVellis & Thorpe, 2021). Of these items, eight items presented positive, non-hazing behaviors (e.g., "Made me feel valued"), whereas the other 61 presented behaviors that ranged from obvious definitions of hazing (e.g., "Were physically aggressive with me") to more ambiguous experiences (e.g., "Required me and other new members to be unified"). Students were then asked to rate the level of stress (1=No stress, 5=High stress) for each behavior they noted to have experienced. Additionally, we developed new scales intended to measure organizational sense of community (11 items; e.g., "I matter to the members of this organization") and stress related to new membership (16 items; e.g., "I find thinking about my new member experience to be uncomfortable").

Rasch modeling was selected as the primary technique to test the psychometrics of the scales to respond to RQ1 for several reasons. Our primary motivation is that the Rasch model holds to the principles of objective measurement (Boone et al., 2014; Thurstone, 1928) and allowed us to examine the validity and reliability of the scale independent from the sample used. All methods of psychometric analysis were conducted using the Andrich-Wright Rating Scale Model (RSM) in the Winsteps (version 3.92.1) software. The RSM assumes that the distance between response option categories is the same across all the items. Additionally, all extreme respondent scores were excluded from the analysis, which is recommended to reduce measurement error (see Boone et al., 2014). This removed the 410 respondents (56.1%) who indicated not experiencing any hazing behaviors from the analysis, leaving 305 responses remaining. We examined the psychometric

properties of the scale using unidimensionality metrics, outfit statistics, category probability curves, reliability estimates, and the Andrich-Wright map.

Table 1
Demographic Information for Study Respondents (N=731)

	N	%
Gender		
Gender-queer	23	3.1%
Man	177	24.2%
Transgender man	6	0.8%
Transgender women	2	0.3%
Woman	507	69.4%
Another gender identity	16	2.2%
Racial or Ethnic Identity		
Black/African American	51	7.0%
Asian/Asian American	172	23.5%
Native Hawaiian/Other Pac Island	1	0.1%
Hispanic/Latino	148	20.2%
International/Non-resident	30	4.1%
More than one race	23	3.1%
Race unknown	31	4.2%
White	275	37.6%
Parental Education		
Not sure	15	2.1%
Attended high school, but did not graduate	31	4.2%
Completed high school	86	11.8%
Attended college, but did not graduate	96	13.1%
Completed college	253	34.6%
Attended graduate school, but did not graduate	10	1.4%
Completed graduate school	231	31.6%
Unknown	9	1.2%
Class Year		
First-year	129	17.6%
Second-year	155	21.2%
Third-year	196	26.8%
Fourth-year	249	34.1%
Institution		
Northeast Flagship University	140	19.2%
Midwest State University	193	26.4%
Southwest Public University	398	54.4%
Semester Joined Organization		
Spring 2025	49	6.7%
Fall 2024	285	39.0%
Spring 2024	59	8.1%
Fall 2023	134	18.3%
Spring 2023	39	5.3%
Fall 2022	90	12.3%

Spring 2022	17	2.3%
Fall 2021	45	6.2%
Spring 2021 or earlier	13	1.8%

Table 2

Organization Membership for Study Respondents (N = 731)

	N	%
Academic organization	177	24.2%
Club sports organization	77	10.5%
Greek letter social sorority	68	9.3%
Cultural or community organization	63	8.6%
Religious or spirituality organization	48	6.6%
Service organization	33	4.5%
Performing arts organization	30	4.1%
Honors organization or society	29	4.0%
Special interest organization	29	4.0%
Greek letter social fraternity	25	3.4%
Health and wellness organization	20	2.7%
Creating or crafting organization	16	2.2%
Student government organization	16	2.2%
Technology organization	14	1.9%
Sports or gaming organization	13	1.8%
Advocacy organization	12	1.6%
Environmental or agricultural organization	12	1.6%
Varsity athletics team	10	1.4%
Military organization	9	1.2%
Political interest organization	8	1.1%
Programming organization	8	1.1%
Activism organization	6	0.8%
Publication organization	6	0.8%
Learning community	2	0.3%

Table 3

Demographic information of Cognitive Interview Participants

Pseudonym	Institution	Primary organizational affiliation	Class Year	Gender identity	Racial or ethnic identity
Henrick	Midwest State University	Club sports organization	Fourth year	Man	White
Marie	Midwest State University	Religious or spiritual organization	First year	Woman	White
Perrin	Midwest State University	Performing arts organization	Third year	Woman	White
Grace	Northeast Flagship University	Cultural or community organization	Third year	Woman	White
Nova	Northeast Flagship University	Club sports organization	First year	Man	Asian or Asian American
Tiffany	Southwest Public University	Social sorority	Fourth year	Woman	Black or African American
Moon	Southwest Public University	Academic organization	Third year	Woman	Asian or Asian American

To enhance face validity and reduce measurement error (Willis, 2005), we conducted three cognitive focus group interviews with survey participants within days of the survey administrations, holding one focus group with students at each institution. In total, we interviewed eight participants (see Table 3 for demographic information). The cognitive interviews were coded using a constant comparative method of analysis (Charmaz, 2006).

To respond to RQ2 and RQ3, we created several multiple linear regression models, entering independent variables in blocks to examine if they predicted each of our three outcomes. The outcomes in our model with mental health, self-esteem and campus sense of belonging. We measured mental health using the Mental Health Inventory (MHI-5; Berwick et al., 1991). The five-item measure ($\alpha = 0.75$) was developed as a brief screening questionnaire, with higher scores indicative of favorable mental health. We relied on Rosenberg (1965) Self-Esteem Scale to measure self-esteem. Higher scores on this widely used scale indicates that an individual has higher self-esteem. Campus sense of belonging was measured with a scale adapted by Rowan-Kenyon et al. (2021) from Bollen and Hoyle (1990). The eight-item scale ($\alpha = 0.90$) examined students' sense of belonging to their campus communities (e.g., I feel a sense of belonging to the campus community).

Our model was created in three blocks. First, we entered students' lived experiences and social identities, including class year, racial and ethnic identity and gender identity. Then, we entered the NMHES subscales (hazing experiences) to respond to RQ2. Finally, we entered NMESS (new member stress) to respond to RQ3.

Findings

Research Question 1: ***To what extent does the NMHES measure student hazing experiences and the NMESS measure the stress associated with these experiences in a multi-institutional sample?***

We began our analysis by evaluating the dimensionality of the items using parallel analysis (PA) in the Winsteps software. Dimensionality analysis provides scholars with a sense of how many factors are present in the items; this approach is similar to using exploratory factor analysis (EFA). Since eight items were already intended to measure positive experiences, we excluded those from our initial analysis. Of the 61 remaining items related to hazing, the PA indicated two clusters were present: one which consisted of the five most ambiguous items and another with all the other items. After removing the five items from the first cluster, we re-examined the dimensionality of the remaining 56 items. These items fit onto one cluster, suggesting a unidimensional construct for hazing experiences.

We then turned to model fit to examine which items should remain on the scale. Conventional recommendations (Linacre, 2002) suggest items fit the Rasch model well when they exhibit outfit mean-squares fit statistics (MNSQ) between 0.5 and 1.5 logits, a point-biserial correlation greater than 0.30, and close observed and expected point-biserial correlations (i.e., < 0.15). Inspection of the outfit MNSQ and point-biserial correlation statistics was done along with examination of the person fit statistics. Ultimately, 25 items needed to be removed due to model misfit. The final 31 items with outfit scores are presented in Table 4.

One of the unique features of this survey is the use of a three-point response scale instead of true/false options to gauge hazing experiences. We examined the efficacy of the scale using category probability curves and item polarity analysis. The curves suggested that the scale worked well for respondents (see Figure 1). Additionally, none of the items exhibited misordered response categories, so all were kept for the scale after this phase of analysis.

We used the Winsteps-generated reliability scores to examine the generalizability of the scale. Crohbach's alpha was 0.94 and the item reliability score was 0.92, suggesting the sample is large enough to detect stable estimates. However, the person reliability score was 0.57, which we hypothesize is low due to the number of respondents without high scores (see Linacre, 2023).

Finally, we examined the Andrich-Wright map to examine the scale's ability to detect change in scores over time. When reading a person-item map, items are presented on the right with respondents' scores shown on the left. The least frequent items are at the bottom of the map, whereas the most frequent items are at the top of the map; respondents with the least hazing experience are located at the bottom of the map, and those with the most hazing are located at the top of the map. Figure 2 presents the map for the hazing scale and shows good coverage of the

Table 4

Rasch Model Item Fit Statistics (Presented in Descending Outfit MNSQ Order)

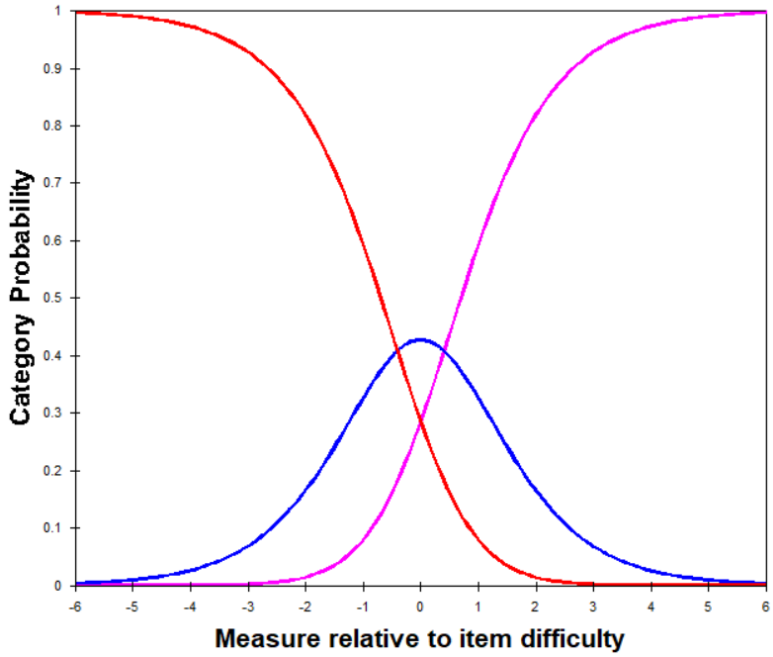
Item	Non-Extreme Count	Rasch Rarity Measure	Model S.E.	Outfit MNSQ	Outfit ZSTD	Observed Point-Biserial Correlation	Expected Point-Biserial Correlation
Hazing Experiences Scale							
Made fun of me	304	-0.980	0.130	1.395	2.141	75.329	79.426
Kept organizational secrets from be before I became a full member	304	-1.350	0.120	1.357	2.301	71.053	73.915
Prevented me from wearing certain clothes	304	0.060	0.180	1.332	1.181	90.461	89.658
Excluded me from organizational events	304	0.600	0.220	1.280	0.831	94.079	92.785
Forced me to attend certain organizational events when I didn't want to go	304	-0.750	0.140	1.204	1.081	80.592	82.229
Expected I clean up for existing members	304	-0.480	0.150	1.154	0.751	83.553	84.643
Expected me to memorize information not relevant to the organization	304	-0.310	0.160	1.126	0.601	87.500	86.762
Treated me as if I was less than a full member of the organization	304	-0.800	0.140	1.077	0.471	80.592	81.378
Expected that I complete errands for existing members	304	-0.030	0.170	1.032	0.211	89.145	89.098
Tested my knowledge about irrelevant organizational facts	303	-0.710	0.140	1.022	0.181	80.858	82.454
Made me feel like a lower-status member of the organization	304	-1.170	0.120	1.017	0.161	79.276	77.020
Tried to embarrass me	303	0.050	0.180	0.995	0.071	89.439	89.779
Screamed at me	304	0.060	0.180	0.995	0.071	88.487	89.658
Avoided socializing with me	304	-0.500	0.150	0.985	0.001	84.868	84.455
Tried to mess with my emotions	304	-0.310	0.160	0.949	-0.149	85.855	86.762
Yelled at me	303	-0.340	0.160	0.877	-0.479	85.479	86.633
Purposely ignored me	303	0.120	0.180	0.830	-0.539	91.419	90.209
Fined me for not attending organizational events	304	0.340	0.200	0.829	-0.469	91.447	91.289
Expected me to memorize useless information	304	0.000	0.180	0.797	-0.719	90.461	89.311
Kept me from benefiting from social privileges of being a existing member	304	0.190	0.190	0.785	-0.689	92.105	90.493
Required me to participate in activities that were intended to be stressful	304	-0.540	0.150	0.783	-1.059	86.184	84.164
Isolated me before I became a full member	304	0.510	0.210	0.748	-0.689	94.079	92.233
Put me in uncomfortable situations on purpose	304	0.130	0.180	0.743	-0.889	92.105	90.080
Fined me for not obeying organizational rules	304	0.970	0.250	0.742	-0.519	94.408	94.417
Tried to trick me	304	0.270	0.190	0.686	-1.049	91.776	90.897
Tried to humiliate me on purpose	303	0.600	0.220	0.608	-1.149	93.729	92.979

	Forced me to complete tasks not relevant to our organization	304	0.510	0.210	0.604	-1.229	94.079	92.233
	Critiqued my physical appearance	304	0.230	0.190	0.603	-1.449	91.447	90.696
	Required me to participate in risky activities not relevant to the organization	304	1.100	0.260	0.600	-0.869	96.053	94.888
	Forced me to consume undesirable food items	304	1.580	0.310	0.532	-0.780	97.039	96.625
	Physically secluded me from others	304	0.970	0.250	0.511	-1.250	94.408	94.417
*	Harassed me	-	-	-	-	-	-	-
*	Limited my communication with my family	-	-	-	-	-	-	-
*	Made me participate in intentionally embarrassing activities	-	-	-	-	-	-	-
*	Tried to make me cry	-	-	-	-	-	-	-
*	Prevented me from talking with other students outside of the organization	-	-	-	-	-	-	-
*	Expected me to drink alcohol at new member activities	-	-	-	-	-	-	-
*	Hit me	-	-	-	-	-	-	-
*	Struck me with objects	-	-	-	-	-	-	-
*	Were physically aggressive with me	-	-	-	-	-	-	-
*	Required me and other new members to wear matching clothing or costumes intended	-	-	-	-	-	-	-
*	Made me participate in intense physical activities that were not relevant to the	-	-	-	-	-	-	-
*	Attempted to physically harm me	-	-	-	-	-	-	-
*	Deprived me of food	-	-	-	-	-	-	-
*	Deprived me of water	-	-	-	-	-	-	-
*	Physically restrained me	-	-	-	-	-	-	-
*	Required me to complete unpleasant tasks	-	-	-	-	-	-	-
*	Required me to keep an unusual item in my possession	-	-	-	-	-	-	-
*	Excluded me from interacting with existing members	-	-	-	-	-	-	-
*	Prevented me from participating in the organization's social activities	-	-	-	-	-	-	-
*	Attempted to deceive me	-	-	-	-	-	-	-
*	Prevented me from fully participating in organizational meetings before I became	-	-	-	-	-	-	-
*	Required me to ignore other new members	-	-	-	-	-	-	-
*	Asked me to accomplish impossible tasks	-	-	-	-	-	-	-
*	Set impossible expectations hoping I would fail	-	-	-	-	-	-	-
*	Tried to confuse me	-	-	-	-	-	-	-

Cohesive Experiences Scale							
Expected me to socialize with other organization members	618	-0.771	0.075	1.113	1.681	61.974	64.480
Required me and other new members to be unified	618	-1.073	0.075	1.035	0.521	62.945	63.936
Required me to hang out with other new members	618	1.670	0.093	0.779	-1.689	74.272	77.063
Expected me to bond with other new members	618	-2.621	0.082	0.777	-1.889	74.595	69.998
Expected all new members to speak with a unified voice	618	2.796	0.117	0.586	-1.929	87.379	85.468
Positive Experiences Scale							
Tried to build meaningful relationships with me	607	0.503	0.069	1.179	2.881	59.967	60.037
Were honest with me	607	-0.851	0.086	1.086	0.871	72.817	73.177
Were concerned about my wellbeing	607	1.288	0.067	1.052	0.951	56.343	56.173
Acknowledged my contributions to the organization	607	0.613	0.069	1.052	0.901	59.638	57.500
Cared about my mental health	607	0.632	0.069	0.933	-1.159	59.638	57.493
Treated me as an equal member of the organization	607	-1.128	0.092	0.848	-1.349	77.759	76.465
Supported me to be successful	606	-0.752	0.084	0.830	-1.849	74.092	72.386
Made me feel valued	606	-0.304	0.077	0.776	-3.069	72.112	67.199

** Item removed due to misfit*

Figure 1. Category Probability Curves for Hazing Experiences Scale



construct, except for a substantial floor effect. However, extreme scores (i.e., those who did not experience any hazing behaviors) are included in the map.

Following the analysis of the initial 56 hazing items, we considered the metrics for the remaining eight items related to positive experiences and five items on the second cluster (cohesive experiences) from the hazing unidimensionality analysis. Items exhibited good model fit on their respective scales (see Table 4). The category probability curves and item polarity analysis also indicated the three-point response options worked well for these scales. Finally, the Cronbach's alpha (item reliability score) for the positive experiences and cohesive experiences was 0.80 (0.66) and 0.72 (0.75), respectively. Person reliability scores were also good for both scales (0.99 and 1.00).

Rasch analysis of the community scale suggested that four items did not fit the Rasch model and should be removed from the scale, resulting in a seven-item scale with Cronbach's alpha = 0.96. Fourteen of the 16 items tested on the new member stress scale fit the model. This final scale had a Cronbach's alpha = 0.97. See Table 5 for the mean (standard deviation) scores on the scales examined for all students in the sample. Tables 6 and 7 present the mean scores on these scales by organizational type.

A few themes emerged from our cognitive interviews with survey participants that support our Rasch analysis findings. Overall, participants reported that the survey items were clear and concise, and that they generally could recall their new member experiences and the associated stress. They also reported that they could easily interpret the ratings scale for the frequency of experiences or the associated stress. Some participants, particularly those in academic and community organizations, reported that some of the items were surprising because they were

Figure 2. Andrich-Wright Map of Responses to Hazing Experiences Scale

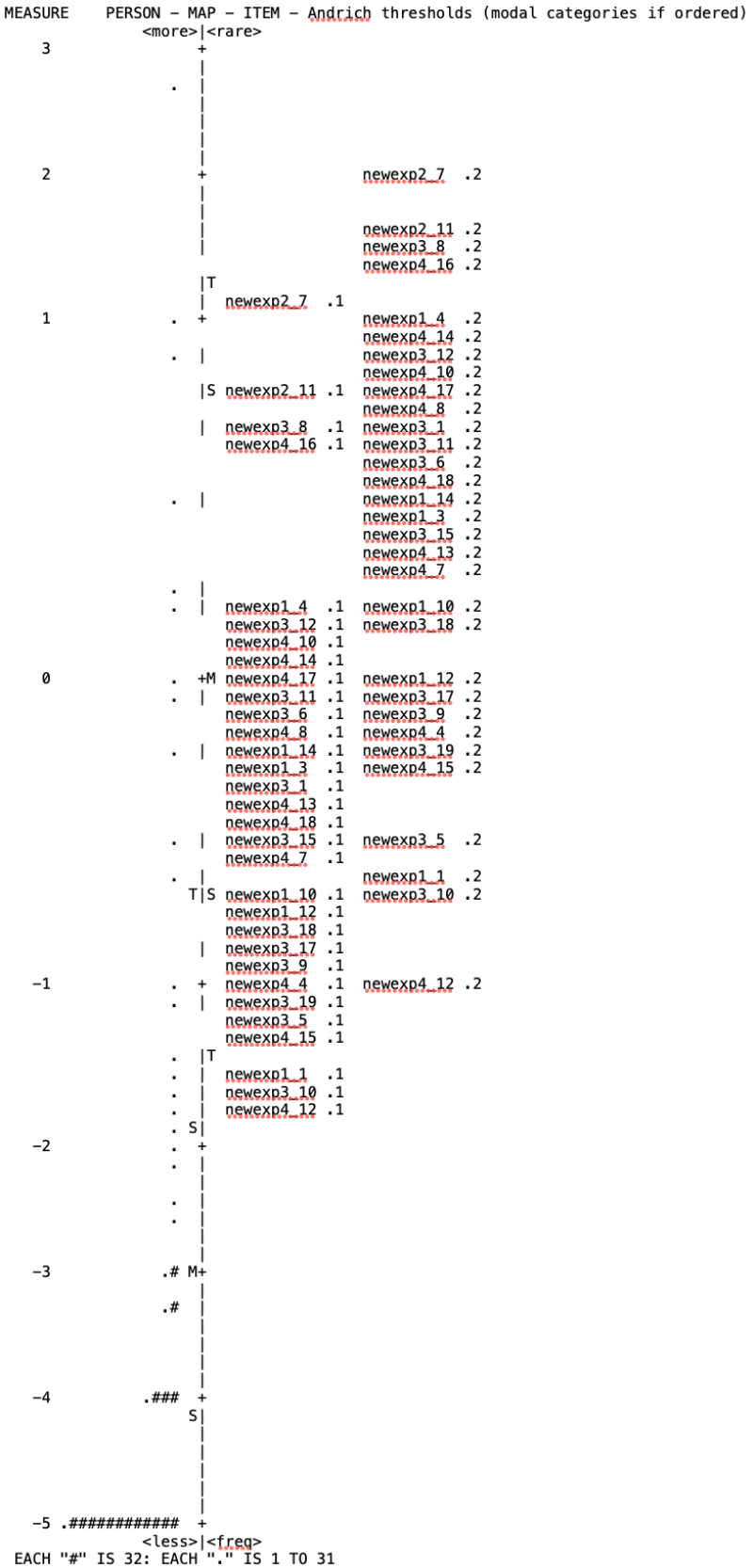


Table 5

Factor Scores for Study Respondents

	N	M	SD
Hazing Experiences (alpha = 0.94)	713	1.204	1.688
Positive Experiences (alpha = 0.80)	716	6.844	1.908
Cohesive Experiences (alpha = 0.72)	675	3.879	2.031
Organizational Sense of Community (alpha = 0.96)	679	7.441	2.318
New Member Rationale (alpha = 0.91)	717	4.181	1.190
New Member Stress (alpha = 0.97)	700	1.404	2.048
New Member Investiture (alpha = 0.66)	726	7.569	1.942
Campus Sense of Belonging (alpha = 0.93)	701	7.331	2.071
Self-Esteem (alpha = 0.87)	712	6.207	2.083
Mental Health (alpha = 0.76)	714	6.234	1.871

Note: All scores are scaled from 0 to 10 for interpretability.

not relevant to their experiences (e.g., being hit as a new member). Some participants also reported that the stress they experienced as new members was affected by other experiences (e.g., academic obligations, family circumstances). However, participants reported that they could accurately respond to the items in the survey.

Research Question 2: ***To what extent are hazing experiences related to indicators of well-being, including mental health, self-esteem and sense of belonging?***

The findings for our regression model for mental health as an outcome can be reviewed in Table 8. Our findings indicate that hazing experiences are negatively associated with student mental health (β = -0.155, p<.001), while positive new member experiences are positive associated with this outcome (β = 0.155, p<.001). In other words, students who reported experiencing more hazing reported more mental health challenges. Student who reported engaging in positive new member experiences reported better mental health outcomes.

Similarly, our findings indicate that hazing experiences are negatively associated with student self-esteem (β = -0.091, p=.036), while positive new member experiences are positive associated with this outcome (β = 0.247, p<.001). Positive new member experiences is a stronger predictor of student self-esteem than hazing experiences. The full findings for this model are presented in Table 9.

Finally, the findings for our regression model for sense of belonging as an outcome can be reviewed in Table 10. We found that hazing experiences are negatively associated with student sense of belonging (β = -0.145, p<.001), while positive new member experiences (β = 0.354, p<.001) and cohesive experiences (β = 0.106, p=.012) are positive associated with this outcome. Our findings suggest that experiencing hazing may reduce sense of belonging to a campus community, but that

Table 6

Mean (Standard Deviation) New Member Experiences by Organization Membership

	Hazing Experiences			Positive Experiences			Cohesive Experiences		
	N	M	SD	N	M	SD	N	M	SD
Academic organization	174	0.94	1.52	175	6.23	1.93	164	3.67	1.88
Activism organization	6	0.40	0.99	6	6.79	1.23	6	2.29	1.71
Advocacy organization	12	0.25	0.59	12	6.65	1.72	10	1.97	1.68
Club sports organization	73	1.14	1.49	76	7.05	1.55	73	3.77	1.83
Creating or crafting organization	16	0.99	1.27	16	6.58	1.28	15	3.49	1.76
Cultural or community organization	62	1.08	1.54	60	6.33	1.84	58	3.88	2.00
Environmental or agricultural organization	11	0.62	1.12	12	6.49	1.22	11	3.07	2.21
Greek letter social fraternity	25	3.69	2.33	25	6.78	2.10	22	5.81	2.03
Greek letter social sorority	67	2.04	1.85	62	7.62	2.07	56	5.26	1.81
Health and wellness organization	19	1.31	1.85	20	6.65	1.54	17	3.59	1.86
Honors organization or society	28	0.74	1.35	29	6.97	1.82	26	3.88	2.16
Learning community	2	3.94	5.57	2	7.67	3.29	1	4.88	.
Military organization	9	2.55	2.69	8	6.54	1.03	9	4.52	2.01
Performing arts organization	30	1.36	1.66	29	7.98	1.71	30	4.85	1.70
Political interest organization	8	1.49	1.68	8	6.23	2.27	8	3.38	1.83
Religious or spirituality organization	45	0.58	1.13	48	8.44	1.44	47	3.08	2.01
Programming organization	8	1.05	2.42	8	5.76	3.32	7	3.03	3.06
Publication organization	6	0.51	0.78	6	6.50	0.74	5	3.48	1.37
Service organization	33	0.38	0.77	33	6.90	1.68	33	4.07	2.12
Special interest organization	27	1.33	1.44	28	7.10	1.68	28	4.15	1.85
Sports or gaming organization	13	1.27	2.08	13	6.41	2.09	11	1.94	1.81
Student government organization	16	1.83	1.31	16	6.51	2.04	16	4.04	2.18
Technology organization	13	0.60	0.98	14	6.83	2.03	13	2.57	1.39
Varsity athletics team	10	1.88	1.93	10	6.62	1.86	9	4.45	1.01
Total	713	1.20	1.69	716	6.84	1.91	675	3.88	2.03

Note: The highlighted cells indicate those mean scores higher than the overall average (grand mean) of the scale

positive new members experiences and ones that foster cohesion among new members may promote sense of belonging.

Research Question 3: *To what extent does the new member stress mediate the relationship between hazing experiences and indicators of well-being?*

After adding new member stress to each of the models (see Tables 8, 9 and 10), we found that new member stress mediated the relationship between hazing experiences and each of the three outcomes. In the mental health model, hazing experiences remained a statistically significant predictor of mental health (β = -0.120, p=.010), but the effect of this relationship was slightly diminished with the addition of new member stress. We found that new member stress was negatively associated with mental health (β = -0.120, p=.008). In the self-esteem model, hazing

Table 7

Mean Factor Scores by Organization Membership

	Organizational Sense of Community			New Member General Stress			Campus Sense of Belonging		
	N	M	SD	N	M	SD	N	M	SD
Academic organization	166	7.08	2.39	171	1.58	2.27	174	7.03	2.25
Activism organization	5	8.88	0.90	6	0.00	0.00	5	7.67	1.49
Advocacy organization	12	6.63	2.44	12	1.21	1.85	11	7.01	1.91
Club sports organization	68	8.00	1.92	75	1.16	1.73	72	7.48	1.80
Creating or crafting organization	13	6.98	2.31	15	0.92	1.65	14	6.76	2.71
Cultural or community organization	56	6.81	2.37	60	1.45	2.04	61	7.09	1.80
Environmental or agricultural organization	12	7.77	1.95	12	1.20	2.00	12	7.64	2.31
Greek letter social fraternity	23	7.73	2.55	22	1.90	2.28	25	7.67	2.03
Greek letter social sorority	67	7.74	2.57	62	1.25	1.83	65	8.04	1.88
Health and wellness organization	19	7.00	2.22	20	1.50	2.24	19	6.47	1.76
Honors organization or society	26	7.19	2.39	28	1.42	2.11	28	7.16	2.35
Learning community	2	7.87	0.00	2	4.02	5.69	2	6.88	0.29
Military organization	9	6.97	2.16	8	2.62	2.37	9	6.62	2.17
Performing arts organization	28	8.09	2.01	29	1.38	2.05	30	7.75	1.95
Political interest organization	8	6.98	2.39	7	1.57	2.08	7	5.83	1.63
Religious or spirituality organization	46	8.55	1.77	46	0.81	1.35	45	8.13	1.94
Programming organization	7	5.27	2.51	8	3.18	2.80	8	5.42	3.41
Publication organization	6	7.87	2.84	6	0.55	0.97	6	7.57	1.91
Service organization	31	7.93	2.34	32	0.87	1.25	32	8.15	1.63
Special interest organization	26	7.86	1.99	28	0.72	1.64	29	7.28	1.99
Sports or gaming organization	13	6.89	2.86	13	3.11	2.91	11	6.33	2.41
Student government organization	14	6.63	2.05	14	2.14	2.53	15	7.22	1.80
Technology organization	12	7.14	2.24	14	1.00	1.65	12	7.19	1.41
Varsity athletics team	10	7.19	2.18	10	2.83	2.31	9	7.45	1.83
Total	679	7.441	2.318	700	1.404	2.048	701	7.331	2.071

Note: The highlighted cells indicate those mean scores higher than the overall average (grand mean) of the scale

experiences did not have a statistically significant relationship with self-esteem once new member stress was added to the model (β = -0.018, p=.688). New member stress was negatively associated with self-esteem (β = -0.250, p<.001). Similarly, hazing experiences did not have a statistically significant relationship with sense of belonging once new member stress was added to the final model (β = -0.061, p=.104). New member stress was negative associated with sense of belong (β = -0.258, p<.001). These findings suggest that new member stress mediates the relationships between hazing experiences and various student organization member well-being outcomes.

Table 8

Relationships Between Hazing Experiences, New Member Stress and Student Mental Health

	Model 1			Model 2		
	β	**SE**	**p-value**	β	**SE**	**p-value**
Intercept		0.765	<.001		0.785	<.001
Class Year						
First-year	0.000	0.284	0.995	0.008	0.284	0.871
Second-year	0.026	0.233	0.604	0.027	0.232	0.576
Fourth-year	0.036	0.267	0.483	0.025	0.266	0.617
Racial or Ethnic Identity						
African American or Black	0.075	0.523	0.383	0.074	0.52	0.389
Asian or Native Hawaiian/Pacific Islander	-0.046	0.335	0.529	-0.026	0.335	0.726
Hispanic	-0.156	0.368	0.036	-0.140	0.367	0.058
International	0.072	0.677	0.489	0.067	0.673	0.515
Multiracial	-0.091	0.731	0.407	-0.105	0.728	0.338
Unknown	0.101	0.69	0.334	0.103	0.686	0.323
Gender Identity						
Trans, gender-queer or non-binary	-0.431	1.078	0.001	-0.451	1.074	<.001
Cisgender man	0.195	0.552	0.143	0.221	0.550	0.157
New Member Experiences						
Hazing Experiences	-0.155	0.131	<.001	-0.120	0.136	0.010
Positive Experiences	0.155	0.091	<.001	0.122	0.094	0.006
Cohesive Experiences	0.065	0.076	0.156	0.064	0.076	0.157
New Member Stress						
New member stress				-0.120	0.058	0.008

Discussion

Relevant to our first research question, we developed and validated the NMHES, a 31-item measure of college student organization members' experiences with hazing as new members. The NMHES addresses a major void in the scholarship on hazing, providing scholars and practitioners with scale to measure new members' hazing experiences.

In addition, our efforts to develop and validate the NMHES led to the development and validation of two other distinct scales relevant to new members experiences in college student organizations, the New Member Positive Experiences Scale (NMPES) and New Member Cohesion Experiences Scale (NMCS). These findings are novel and important because the development of these scales provide evidence that new member experiences are not only situated in hazing, but also may afford new members with prosocial experiences or those that center community-building. In other words, college student organization new members may also have fruitful experiences as they join organizations. These scales afford scholars and practitioners to examine these experiences in greater detail.

We also developed and validated the NMESS, a 14-item measure of the stress new members experiences as part of their experiences joining student organizations. This measure indicates that experiencing stress is a potential outcome of the new member experience. Other than hazing

experiences alone, this measure may help provide scholars and practitioners with a more nuanced understanding of the outcomes associated with the college student organization membership processes.

Table 9

Relationships Between Hazing Experiences, New Member Stress and Student Self-Esteem

	Model 1			Model 2		
	β	**SE**	**p-value**	β	**SE**	**p-value**
Intercept		1.088	<.001		1.09	<.001
Class Year						
First-year	-0.051	0.404	0.308	-0.033	0.394	0.499
Second-year	0.074	0.331	0.124	0.078	0.322	0.096
Fourth-year	0.006	0.38	0.906	-0.016	0.37	0.745
Racial or Ethnic Identity						
African American or Black	0.221	0.744	0.009	0.218	0.723	0.008
Asian or Native Hawaiian/Pacific Islander	-0.239	0.476	<.001	-0.197	0.465	0.005
Hispanic	-0.302	0.523	<.001	-0.269	0.51	<.001
International	0.087	0.963	0.391	0.077	0.935	0.433
Multiracial	-0.075	1.039	0.487	-0.103	1.011	0.323
Unknown	0.144	0.981	0.16	0.148	0.953	0.139
Gender Identity						
Trans, gender-queer or non-binary	-0.277	1.532	0.032	-0.319	1.492	0.011
Cisgender man	0.245	0.784	0.059	0.301	0.764	0.018
New Member Experiences						
Hazing Experiences	-0.091	0.187	0.036	-0.018	0.189	0.688
Positive Experiences	0.247	0.129	<.001	0.177	0.13	<.001
Cohesive Experiences	0.059	0.108	0.18	0.058	0.105	0.177
New Member Stress						
New member stress				-0.250	0.081	<.001

Consistent with scholarship on hazing and mental health (e.g., Waldron, 2024), our findings also suggest that hazing experiences during the new member process are negatively related members' mental health, self-esteem and campus sense of belonging. However, we found that new member stress mediates these relationships, indicating that this stress is a more powerful predictor of these concerning outcomes than experiencing hazing alone. In addition, positive new member experiences are positively associated with mental health, self-esteem and campus sense of belonging. These findings add to the scholarship on new member experiences by providing a more complex understanding of how these experiences and the associated stress relate to members' well-being and belonging.

Like other research (e.g., Allan & Madden, 2008), our findings indicate that students' experiences with hazing differ between organizations (see Table 7). We add to the scholarship on new member experiences by providing evidence that new members' positive experiences and cohesive experiences also differ between organizations, suggesting that new member experiences are complex and multifaceted. For example, sorority women in our study reported experience hazing,

positive and cohesive experiences higher than the means across all three scales. In other words, these members may simultaneously engage in experiences that promote unity, lead to positive outcomes and could be considered hazing. In addition, experiences often associated with hazing

Table 10

Relationships Between Hazing Experiences, New Member Stress and Student Campus Sense of Belong

	Model 1			Model 2		
	β	**SE**	**p-value**	β	**SE**	**p-value**
Intercept		0.937	<.001		0.935	<.001
Class Year						
First-year	0.005	0.349	0.909	0.023	0.338	0.615
Second-year	-0.042	0.284	0.355	-0.041	0.275	0.358
Fourth-year	0.003	0.325	0.945	-0.015	0.315	0.745
Racial or Ethnic Identity						
African American or Black	0.05	0.641	0.53	0.045	0.62	0.557
Asian or Native Hawaiian/Pacific Islander	-0.047	0.406	0.477	-0.004	0.395	0.953
Hispanic	-0.03	0.441	0.66	-0.004	0.428	0.951
International	0.033	0.801	0.725	0.033	0.775	0.715
Multiracial	-0.052	0.871	0.599	-0.083	0.843	0.387
Unknown	-0.09	0.865	0.361	-0.086	0.837	0.368
Gender Identity						
Trans, gender-queer or non-binary	-0.244	1.297	0.042	-0.291	1.257	0.013
Cisgender man	0.206	0.662	0.088	0.262	0.642	0.025
New Member Experiences						
Hazing Experiences	-0.145	0.161	<.001	-0.067	0.163	0.104
Positive Experiences	0.354	0.112	<.001	0.284	0.113	<.001
Cohesive Experiences	0.106	0.094	0.012	0.107	0.091	0.009
New Member Stress						
New member stress				-0.258	0.069	<.001

were reported so infrequently that they were not included in our final model (e.g., being hit or harassed). While these experiences are concerning, these experiences may not be aspects of most college student organization new members' experiences.

Implications for Policy and Practice

Our findings provide scholars and practitioners with validated measures to examine hazing in college student organizations that goes beyond measuring students' experiences with specific experiences associated with hazing. It can be used to compare student organization members' experiences with hazing between individuals, organizations and institutions that may help practitioners make more informed decisions related to policies and interventions. Similarly, it will allow scholars and practitioners to examine students' others experiences as organization members, including those that promote cohesion or are generally positive. These measures can aid practitioners in having a fuller understanding of student organization new member experiences on their campuses. As such, these measures may help professionals respond to the provision

within the Stop Campus Hazing Act (2024) for research-informed campus-wide prevention programs.

In addition, our findings about the mediating effects of new member stress on hazing experiences may help practitioners in their hazing prevention efforts. Because experiencing hazing alone may not lead to concerning outcomes associated with mental health and belonging, interventions that center these relationships may not resonate with participating students. Similarly, members who experiences hazing and positive experiences as new members may be dismissive of negative outcomes associated with hazing because of the benefits of their positive experiences. In short, practitioners should rethink interventions that made broad causal accusations about the negative impacts of hazing experiences. Participants may dismiss these well-intended statements because they do not align with their new member experiences. Instead, practitioners may want to focus on the detrimental effects of new member stress or acknowledge the benefits of positive new member experiences.

Finally, our finding indicate that practitioners may want to avoid using extreme example of hazing in their hazing prevention programs or hazing definitions in policy documents. Although behaviors like physical violence are concerning, they likely do not represent most new members' experiences with hazing. Instead, practitioners may want include examples about deception ("tried to trick me"), embarrassment ("tried to humiliate me on purpose" or ridicule ("yelled at me") that are likely more common among college student new member experiences.

Implications for Future Research

Our research was limited to data collected from students at three higher education institutions, and our findings may not represent the new member experiences of college student organization members across the United States. Future research should expand the scope of data collection to identify if our findings are generalizable. Conversely, our findings indicate that there is variability in students' new member experiences between organizations. Using larger data sets, researchers may be able to disaggregate their findings to compare new members experiences between organizations or between institutions.

Hazing is not limited to higher education institutions, and students often first experience hazing in middle or high school (Allan & Madden, 2008; McCready et al., 2024). In the future, scholars should use and adapt the NMHES and NMESS to examine hazing experiences in K-12 educational settings.

We examined the relationships of hazing experiences and new member stress with three outcomes, mental health, self-esteem and campus sense of belonging. Researchers should use the NMHES and NMESS to examine the associations of these measures with other outcomes. For example, scholars could use these scales to examine the relationships with academic outcomes or student retention.

Finally, our study used a cross-sectional design from data collected from student organization members (i.e., we did not limit data collection to current new members). We encourage researchers to use the NMHES and NMESS to expand our understanding of hazing and new

member stress during students' new member experiences or to examine the effects of hazing and new member stress across students' experiences using longitudinal designs.

Conclusion

Through our study supported by the NACA Foundation, we developed and validated the NMHES and NMESS and identified the relationships between hazing experiences and new member stress with college students' mental health, self-esteem and campus sense of belonging. These measures can serve as tools that scholars and practitioners can use to advance our understanding of college students' experiences as organization new members and can be used to advance hazing prevention initiatives at colleges and universities across the United States.

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