

Applying the Rasch Model to Explore New College Sorority and Fraternity Members'
Perceptions of Hazing Behavior

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Abstract

On today's college campus hazing presents a threat to the safety and well-being of all incoming freshman. Allen and Madden (2008) presented results from their National Study on Student Hazing showing that 55% of students involved in a student organization, team or club while in college will experience hazing and 90% of students who experience hazing do not believe that they have been hazed. This paper uses a modified instrument based on Allan and Madden's research to collect data at a Southeastern, Research 1 University. Rasch modeling was used to analyze the data and the results support the findings that perceptions of hazing do not match definitions. Additionally real differences in the perception of hazing exist between male and female respondents.

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Hazing is an activity that has been used for centuries by individuals in a position of power to exert their authority or status over other individuals in a position of weakness (Johnson & Holman 2004). The most common forms of hazing are conducted for the purpose of initiation or acceptance into a group, organization or team. The 2008 National Study on Student Hazing showed that 55% of college students who are involved in a club, team or student organization will experience hazing during their college career (Allen & Madden, 2008). Hazing as an activity has been proven to be detrimental for all parties involved including the students who are hazed, the students who haze and the institution overall (Campo, Poulos & Sipple, 2005). Participating in hazing can have lasting effects on the physical and psychological well-being of students (Campo, Poulos & Sipple, 2005). Hazing activities are a leading cause of campus deaths and often result in liability concerns for the institution (Allan & Madden, 2008; Owen, Burke & Vichesky, 2008). In a research study examining hazing beliefs, behaviors and attitudes in college students, the researchers found that while hazing is occurring on a campus, these hazing behaviors are not identified by the students as hazing activities (Campo, Poulos & Sipple, 2005). In fact Allan & Madden (2008) report that 90% of students who identify having experienced a hazing behavior or activity do not identify that they have experienced hazing. The purpose of this paper is use a modified scale from Allen & Madden's 2008 study to develop an instrument that can more accurately identify college students' perceptions of hazing practices. This paper is guided by three research questions; 1) what behaviors do new members of campus sororities and fraternities identify as hazing? 2) Do student perceptions of hazing differ between new sorority

and fraternity members? and, 3) how do student perceptions of hazing differ from university definitions and policies?

Theoretical Framework

Historical Perspective

Hazing finds its roots deep in many cultures and societal rituals throughout history. From the tribal rituals of many African and Native American cultures, young boys were given trials and tasks to accomplish in order to be accepted as worthy of earning the title “man” within the tribe (Johnson & Holman 2004). While these activities served a purpose of teaching survival skills and helping boys prove they could provide for the tribe, the activities themselves have been adopted by many other cultures as forms of “proving one’s worth”. In the Middle Ages when universities began their formation, hazing was adopted as an “integral part of academic and social life (p xi)” (Johnson & Holman 2004). These activities were designed to separate those potential teachers who did not have the physical and mental gifts deemed necessary to teach future generations of students. In the American college system, hazing became the term applied to describe this exercise of initiating lower-class freshmen and sophomore students into the institution and often stemmed as a class rivalry (Solberg, 1998). Whole weeks were identified by the administration of colleges and universities as the appropriate time to “initiate” these men into the educational institutions of the day (Smith 1988). Soon full class brawls developed with freshmen as the main targets of any and all students at a college and the freshmen were expected to defend themselves with as much vigor as possible to prove they could handle the demands of an education. These hazing practices, used as rites of passage on college campuses, date back to the seventeenth century and were often used as methods for upper-class (older) students to intimidate or punish lower-class (younger) students (Solberg, 1998). As early as 1657, hazing as

an activity was used at Harvard university, as “two first year students won a settlement after being hazed (p xi)” (Johnson & Holman 2004). Hank Nuwer (1990) in his research for the book *Broken Pledges* uncovered the first hazing death at an American Institution in 1838 as a result of class hazing, and hazing deaths soon became common place in American society.

As the years passed and the population of enrolled students climbed to heightened numbers, hazing as a class rivalry gave way to hazing practices with college sports teams and Greek societies (Solberg, 1998). Similar to the way upperclassmen hazed new students, fraternal organizations intensified these activities to initiate new members into their organizations. Before long, these organizations would overtake the majority of the hazing activities once many colleges outlawed the practice of openly hazing new students. Much of the expansion of hazing within fraternal organizations can be attributed to soldiers returning to their institutions of higher education with a new found need for the brotherhood they experienced during the Civil War (Johnson & Holman 2004). The soldiers believed that they were closer to one another as “brothers” because of the extreme physical and psychological events of the war and wanted to relive these experiences with new men who sought their friendship. Thus they created extreme scenarios for potential “brothers” to experience in order to be accepted. As higher education moves through the 20th century, deaths related to class hazing incidents decline, but hazing deaths do not stop. Around the 1930s most hazing deaths on college campuses can be attributed to these fraternal groups. As Solberg (1998) describes the history of hazing at the University of Illinois, he concludes that while hazing activities lost momentum as a campus-wide activity that served as a rivalry between classes, “it took on new life in the fraternities that were springing up at Illinois like mushrooms in the spring rain (p 225).”

Hazing in the Twenty-First Century

Moving ahead to the twenty-first century, hazing practices continue to be prevalent in the American postsecondary education system. Hazing includes executing practical jokes on another student, designing activities to humiliate a fellow student, forcing students to drink alcoholic beverages and range from merely an inconvenience to the student being hazed to more serious instances where the student's life may be put in danger and the hazing behaviors are so extreme they are considered to be a crime. For example, a hazing behavior could include a senior demanding that a freshman clean his bathroom or sing a song to a coed, but can go so far as the beating of a fellow student to the point of internal organ failure and potentially death. While hazing behaviors are a serious campus problem at many colleges, this practice is difficult to control as it frequently occurs outside of class time, during the evening hours and away from campus (Solberg, 1998). Campo, Poulos and Sipple confirm that hazing activities can be difficult to identify as they often occur in secrecy (2005). In addition, Allan and Madden found that in 95% of the cases where a student identified that they had been hazed, the student did not report this behavior (2008).

Hazing activities are a leading cause of campus deaths and are interconnected to liability concerns in higher education (Owen, Burke, Vichesky, 2008). College administrators attempt to mediate the collegiate hazing rituals through implementing prevention programs and creating campus hazing policies and some institutions have even went so far as to ban fraternities and sororities from campus (Owen, Burke, Vichesky, 2008). As explained by Solberg (1998), historically, one reason for why hazing occurs is to serve as a rite of passage. Owen, Burke and Vichesky (2008) agree that in the twenty-first century academy, rituals act as a source of bonding in fraternal organizations and that new members are expected to endure a "rite of passage". Results from a study conducted by Owen et al., (2008) found that while hazing occurs in several

organizations, it is particularly dominant in fraternities. This research is supported by Allan & Madden (2008) where they find that 73% of students who participated in a fraternity or sorority would experience at least one hazing behavior or activity during their college career. This same study showed that 74% of intercollegiate athletes, 60% of participants in club sports, and 50% of performing arts students experience hazing (Allan & Madden, 2008). Owen and his research team urge other researchers to continue conducting research on the topic of hazing in order to best inform practice and the creation of data-driven policies to ward off hazing practices on college campuses.

Methods

This research study took place at a Southeastern, Research 1 University where approximately 23% of all students belong to a fraternity or sorority. This survey was provided in a paper and pencil form to all new fraternity and sorority members in the early fall semester of 2010. 381 new fraternity members completed the survey and 700 new sorority members completed the survey for a total of 1081 respondents. The full survey consisted of 10 questions concerning high school experiences with hazing, expectations to participate in hazing while in college and perceptions of hazing behaviors. The study focuses on question 9 of the survey where a series of 24 survey items were identified from existing literature on campus hazing and modified in-house. Creation and modification of items were based on the campus's definition of hazing. The survey question asked students, *Which of the following behaviors do you believe constitutes a hazing behavior or activity?* (mark all that apply). Examples of the survey items include: *study hours, forced participation in a drinking game, paddling, sleep deprivation and drink large amounts of a non-alcoholic beverage (e.g. water)*. If a student marked the response option, the response item was coded as a number 1, indicating that the student believed this

particular item constituted a hazing behavior or activity. If the student left the response option blank, indicating that the particular item did not constitute a hazing behavior, the response item was coded with a 0 (zero). The survey results were analyzed using the Rasch Model for dichotomous data.

The Rasch model for analyzing dichotomous data gives the probability, in logits, of a person giving a “yes” response based the person’s ability and item difficulty (Rasch 1960). For this study, person ability is defined as the likelihood that a student will respond “yes” to a certain perception of hazing. The Rasch model for analyzing dichotomous data was chosen for this study because of the long standing ability of the model to analyze survey data by the use of item fit measures and variable mappings. Data were cleaned and coded in Excel and analyses were complete in Winsteps 3.71.0 (Linacre, 2010). For the purposes of the proposal, two variable maps are presented, and full analyses will be included in the final paper.

Results and Discussion

One of the primary benefits of using the Rasch model for analyzing dichotomous data is the variable maps that represent a visual display of the items and their likelihood of being endorsed. Both survey data for males and females were included in study and were analyzed separately and then compared with one another. For male students, the model measured 24 (all) items and 381 male students, 314 non extreme. For female students, the model measured 24 (all) items and 700 students, 596 non-extreme. Figure 1 is the variable map for males and Figure 2 is the variable map for females. Figure 3 is the variable map key, identifying the survey questions to the corresponding numbers on the variable maps. Both maps can be interpreted using the same guidelines. For the male variable map, each # on the left hand side represents 4 male students taking the survey. The items are represented on the right side of the graph. The location

of the students on the graph is in relationship to their likelihood of agreeing that they would consider items to be hazing. For example, a student towards the top of the map was more likely to say that more items were constituted as hazing than students lower on the map. Similarly, survey items, or possible hazing behaviors, are also aligned on the variable map according to their likelihood of being denoted as a hazing behavior, or a student marking “yes”. Items along the top of the scale are considered more difficult to endorse, or less likely to be considered hazing behaviors than items lower on the scale. The “M” on the left side represents the mean person ability of the students in the sample. The “M” on the right side represents the mean item ability of the survey items. Items in the variable maps have been given numbers, for their display. The key for full survey item names can be found in Appendix A.

As demonstrated in Figure 1, for males, the behaviors most likely to be considered hazing include: “Physically punched, slapped, struck, kicked or beaten in any way”, “Forced to perform sex act”, and “Locked in or restricted to a room or basement of a house or building against your will”. These items were outside two logits, or one standard deviation from the mean of the items. This can be compared with the variable maps for females found in Figure 2. For female students, the survey items most likely to be perceived as hazing similarly include “Physically punched, slapped, struck, kicked or beaten in any way”, “Forced to perform sex act”, “Locked in or restricted to a room or basement of a house or building against your will”. Additionally, females were more likely to perceive “Any form of humiliation or degrading behavior” and “forced participation in a drinking game” as hazing behaviors.

Differences in perception of hazing activities among men and women occur most significantly in the area that is between -1 and -2 logits. In this area, women identify “Forced or excessive physical activity”, “Paddling”, “Drink large amounts of alcohol to the point of getting

sick or passing out”, “Be yelled at, screamed at, or cursed at by other members”, and “Forced consumption of alcohol.” For the men, only one of those four hazing behaviors registers between -1 and -2 logits, “Drink large amounts of alcohol to the point of getting sick or passing out”, while the others in this area are all behaviors the women identified above -2 logits from the mean, “Forced participation in a drinking game”, and “Any form of humiliation or degrading behavior”. When looking at both variable maps side by side it is clear that the women are much more likely to identify the listed items as hazing behaviors in comparison to the men. This can also be identified in the separation that exists between the person mean and the item mean for the female respondents, where the person and item means for the male respondents are much closer to each other.

Similar to identifying survey items most likely to be perceived as hazing behavior, the variable maps can also be used to recognize survey items that are least likely to be perceived as hazing behaviors. Again, for the purposes of this study, behaviors outside two logits or one standard deviation of the mean of all items were identified for both male and female students. For male students, items least likely to be identified as hazing behaviors include: “Study hours”, “collecting active members signatures through the process of interviews”, “Dress codes”, “Sober driving” and “House duties”. Similarly, females were less likely to perceive “Study hours”, “Dress codes”, “Sober driving”, and “Collecting active members’ signatures through the process of interviews”.

In addition to the placement of individual items along the variable map, the general pattern of responses for males and females should also be considered. For example, for a survey, it may be expected that if the variable maps are turned on their side, the pattern of #'s (persons) could represent a normal curve (Bond and Fox, 2007). For both figures 1 and 2, neither pattern of

students approach a normal curve. This is primarily seen in the upper and lower region of the maps. Additionally, the distribution varies for male and female students. For the distribution of perceptions of hazing for male students, the curve is fairly flat, meaning most male students are fairly evenly distributed among the curve. The exception is along the bottom part of the variable map, where items were more likely to be perceived as hazing. For female students, the distribution is skewed to the left. The problem here is that while the majority of students are located between one and four logits, only four items differentiate these students apart. Therefore, to obtain the most accurate measure of these students and their hazing behaviors, more items would be needed between one and four logits. Contrasting this finding from the male perception variable map, the majority of students are differentiated by several items. In other words, both items and students are spread fairly evenly throughout the scale.

Finally in reviewing the variable maps it is clear that there is clumping of the items around the means for both the men and the women. This signifies that the scale could be modified to remove some of the behaviors that are most closely associated with one another in favor of items that may stretch abilities of the persons. The conclusion here may be that while the survey does a good job of differentiating persons that have an average likelihood of endorsing items, it does not do a great job in differentiating persons that are more extreme in their perceptions of hazing behaviors.

At first glance it is clear that new members of fraternities and sororities perceive the act of hazing in much different ways. The men are much less likely to perceive traditional hazing activities such as “Paddling”, “Forced or excessive physical activity”, and “Be yelled at, screamed at, or cursed at by other members” as forms of hazing in comparison to the other items than women. To the women, these activities are clearly perceived as hazing. This may be

attributed to the male acceptance of these types of activities in their expectations of the fraternal experience, or in the case of “Be yelled at, screamed at, or cursed at by other members”, it may infer a familiarity with this experience either from participation in athletic teams or exposure to images of the military where being yelled at is an accepted practice.

Additionally it is interesting to see that both men and women perceived “Any form of humiliation or degrading behavior”, as more likely to be perceived as hazing in comparison to the other items. Logically one might assume that humiliating games and activities would be a more acceptable form of hazing among the student population when compared to items such as “Forced or excessive physical activity” but both populations rated humiliation as a definite hazing activity.

Overall it appears that male and female perceptions of activities line up closely with one another in relations to the items presented for this survey. On the upper half of the map, men and women identify “Study Hours”, “Collecting active members signatures through the process of interviews”, and “House duties” as among the least likely activities to be considered hazing. Literature and practice would agree that these activities, if undertaken appropriately, are not necessarily considered hazing and would be acceptable forms of activity for a new member of a fraternal organization. The maps also identify that student perceptions of activities such as “Sober driving”, “Dress codes”, and “Forced singing or chanting” are less likely to be considered hazing. The acceptance of these activities is consistent with the practice of many Southeastern fraternities and sororities. Common belief among hazing prevention activists would say that these activities are problematic in nature as they set up a system of obedience and deference to authority, which may be hard to overcome when faced with more egregious forms of hazing.

The clumping of items around the mean signifies that student participants had a difficult

time differentiating between the activities listed and that perhaps too many activities of the same nature were provided within the instrument. For future research and study it would be helpful for a few of these clumped items to be removed and replaced with more items at the extreme ends of the map. This should be done in order to provide an item sample that creates a normal curve instead of an item sample that is basically flat in nature with spikes at the ends.

Items presented below in the variable hierarchy maps, are referenced as follows:

1. Forced participation in a drinking game
2. Forced association with certain people and not others
3. Sleep Deprivation
4. Drink large amounts of a non-alcoholic beverage (e.g. water)
5. Be yelled at, screamed at, or cursed at by other members
6. Any form of humiliation or degrading behavior
7. Forced or excessive physical activity
8. House duties
9. Forced to perform sex acts
10. Carrying of items not associated with your daily routine
11. Consumption of food items not part of your regular diet
12. Forced singing or chanting
13. Personal Servitude (i.e. retrieving meals, cleaning apartments, driving)
14. Locked in or restricted to a room or basement of a house or building against your will
15. Physically punched, slapped, struck, kicked or beaten in any way
16. Study Hours
17. Drink large amounts of alcohol to the point of getting sick or passing out
18. Being awoken in the middle of the night
19. Sober driving
20. Forced consumption of alcohol
21. Dress Codes
22. Collecting active members signatures through the process of interviews
23. Paddling
24. Wearing inappropriate apparel or costumes

Figure 1. Hazing Data Hierarchy for Fraternity Members

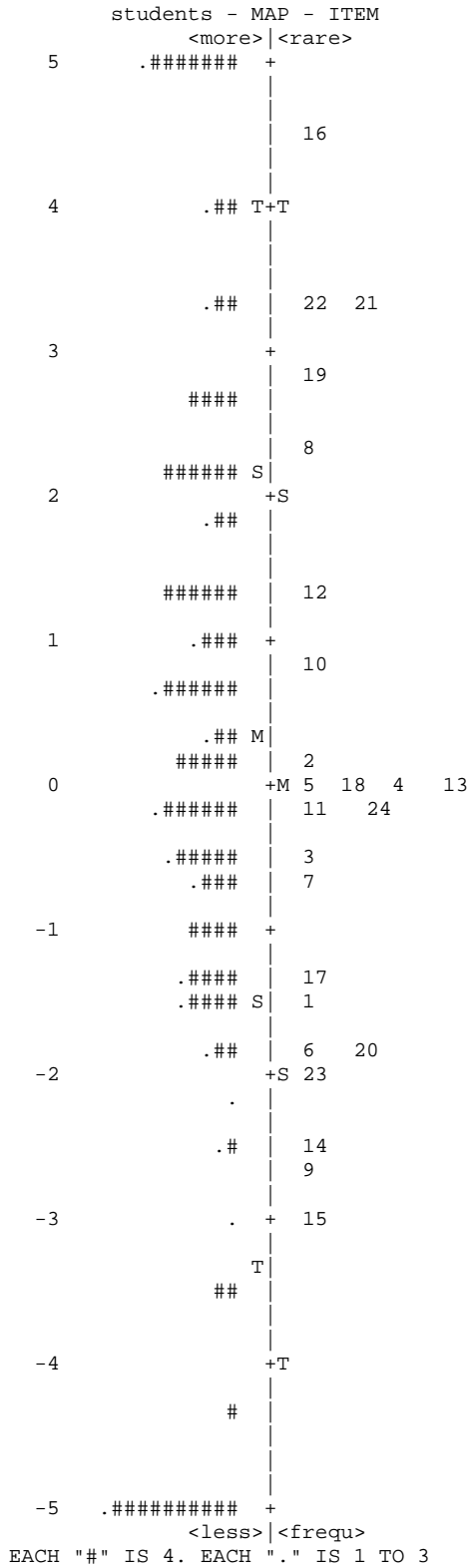
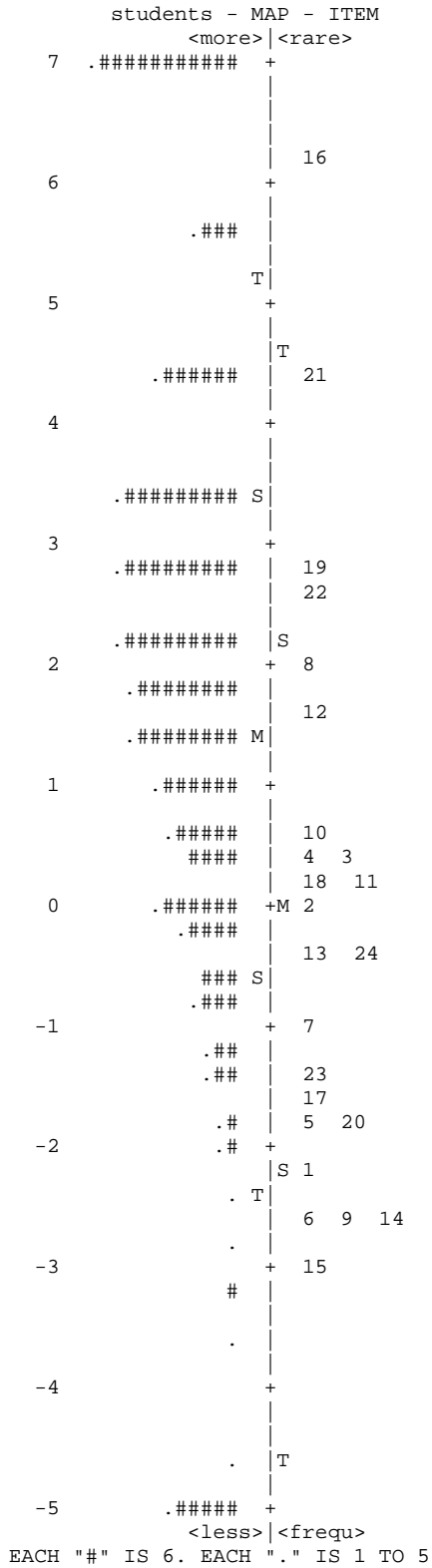


Figure 2. Hazing Data Hierarchy for Sorority Members



Conclusion

This study set out to approach three questions: 1) what behaviors do new members of campus sororities and fraternities identify as hazing? 2) Do student perceptions of hazing differ between new sorority and fraternity members? and, 3) how do student perceptions of hazing differ from university definitions and policies? The answers to questions 1 and 2 are covered above in the results and discussion sections as we say that the most extreme forms of hazing are the items most easily identified by new members of campus fraternities and sororities as hazing behaviors. Additionally the results show that item difficulty differs for the male and female population only on a few items, and yet the majority of the items do not differ dramatically enough to make definitive statements about different perceptions of hazing behaviors.

The last question: how do student perceptions of hazing differ from university definitions and policies, provides the basis for the implication of this study to practice. Most research on the topic of hazing points to a disagreement in the specific activities that constitute hazing. Some states have adopted definitions of hazing that lean heavily on physical injury to the individual, while other states have adopted more broad definitions that include psychological harm, humiliation, or shock (Johnson & Holman 2004). This lack of clear definition has created a culture in American educational institutions (both secondary and post-secondary) where hazing is identified only in its most egregious form as signified by the results of this study. Activities that do not include bodily injury or risk of death are seen as more acceptable forms of practice during a rite of passage. The challenge then for educators is to more clearly define “hazing” to the student population and identify those forms of hazing that students are most likely to encounter in their organization. This is most clearly identified in this study by the clumping of activities that occurs around the item mean for the men and women. This clumping identifies an

inability of both populations to differentiate between multiple activities that some find acceptable and others find inappropriate. The ideal outcome of this study for practitioners would have been clumping toward the bottom of the item map and a wide gap to the next activity as the majority of these items would be considered hazing on our college campuses. The implication being that more education needs to occur before students come to campus in order to make them aware of dangers they may encounter.

In the future, this scale should be modified to provide a clear delineation between activities that are easily defined as hazing, activities that are questionably hazing, and activities that are easily identified as not hazing. This study over sampled on activities that most educators and administrators would consider to be hazing thus not providing a balanced item map. Additionally this research could be done in a pre and post format to see if educational programming and activities help change student perception of hazing activities. This study should be replicated in the future at more institutions and across student populations including athletes, student organizations, performing arts groups, etc. Lastly this research should be done at a high school level to see if student perceptions differ between age groups and if students leave secondary institutions with defined perceptions of hazing that affect their organizational experience in college.

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