

1. RESEARCH IN-BRIEF

Fact: Since 1970, there has been at least one ***hazing-related death*** on a U.S. college campus each year.

Fact: 74% of student-athletes experience at least one ***hazing incident*** (greater than any other student group on campus).

National Study of Student Hazing (Allen & Madden, 2008)

Challenge: Stop Hazing Before It Happens

Hazing in sports occurs due to three contributing factors – the **team** environment, the **perpetrator's** desire to haze and the **victim's** vulnerability to receive hazing.

Solution: Forecast the Team and Individual Risks for Hazing

Funded in part by the NCAA Innovations in Research & Practice Grant Program (2015), the *Hazing Prevention Index (HPI)* consists of three scales detecting **risk for hazing**:

- 1) propensity to be a hazing perpetrator,
- 2) vulnerability to be a hazing recipient, and
- 3) facilitation by the team and the coach environment

Approach: Integrate Scientific and Sports Expertise Into a Prevention Tool

Led by PhD experts with a background in sports measurement and training, the *HPI* was developed in collaboration with over *150 college coaches* and psychometrically validated on over *30 college teams* (across D 1,2,3) and *hundreds of student-athletes*.

Availability: Hazing Prevention Index (HPI) for College Institutional Use

The HPI provides coaches and administrators with automated reporting (confidential, web-encrypted) on its teams and student-athletes.

- **Team-level monitoring (snapshot):** Coaches can assess team's risk of hazing prior to the season. This helps staff determine the level of vigilance and need for intervention, including tools for prevention (e.g. informing the coach to add a new team-building activity during pre-season).
- **Team-level monitoring (longitudinal):** Coaches can track risk level over time. As team membership is often multi-year (where potential recipients one year are potential perpetrators the next), it is valuable to understand if and how the team culture is changing through the coach's monitoring (and intervention).
- **Institutional alert system:** Athletic department officials are able to monitor teams as well as identify high risk individuals. From this information, the administration is able to be notified of risk levels prior to a negative event.

For information on how to use the automated HPI tool for reducing the risk of hazing on your campus, email simon.clements@exactsports.com or call *Simon* at 312-854-2356.

2. DETECTING TEAM POTENTIAL FOR ATHLETE HAZING

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3. PROBLEM STATEMENT

Hazing in sports is publicly condemned and indeed illegal in most states. Yet it remains a persisting practice. Hazing not only directly causes physical and emotional harm to athletes but can have devastating consequences to an athletic program. Athletes frequently hide hazing as the cause of injury when appearing for emergency medical treatment to protect the perpetrators (Finkel, 2002). Moreover, hazing resulting in injury carries substantial institutional liability and negative publicity (Crow & Rosner, 2002). Accordingly, adverse incidents are not publicized even though death caused by hazing is not rare (Nuwer, 2001). Nevertheless, hazing prevalence is as high as 79% (Hoover & Polland, 2003b), and a more recent study of 53 colleges including 11,000 students indicates that over 50% of those who have experienced hazing involved dangerous and/or humiliating acts (Allen & Madden, 2008). There is thus strong rationale for preventing hazing and implementing a positive approach to inculcating team cohesion, loyalty and identity.

Cost-effective prevention requires, however, accurate determination of the probability of the adverse event, namely hazing. This project responds to this critical gap by developing a practical objective assessment to document the probability of hazing occurring on a team. No method is currently available to objectively quantify likelihood of hazing.

4. LITERATURE REVIEW

Hazing is defined as “*any activity expected of someone joining a group that humiliates, degrades, abuses or endangers regardless of the person’s willingness to participate*” (Hoover & Polland, 1999). One large survey of over 60,000 student athletes representing 2,400 colleges and universities revealed that the majority of student athletes have been exposed to hazing involving one or a combination of humiliation, dangerous activity, alcohol (which is illegal until age 21), beating, sexual acts or sleep loss (Hoover & Polland, 2003b; Allen & Madden, 2008). It is also noteworthy that since 1980, hazing practices have sharply trended toward more egregious hazard resulting in severe physical injury and emotional disorder (cited in Crow and Rosner, 2002).

Many factors contribute to hazing practices. Often, this behavior is displaced expression of hostility directed at an in-group member in reaction to chronic intense stress from out-group threat. This cause of hazing is especially common in the military. With respect to in-group membership in athletics, hazing may also reflect the belief that when adversity is surmounted, the team’s attractiveness is strengthened. Accordingly, acquiescence to punishment is accepted to achieve team membership complemented by reinforcing affirmation from peers. From the perspective of the perpetrators, tolerance by the hazzee for punishment implicitly conveys motivation to be a loyal team member manifest as submissiveness to authority. Most research has focused, therefore, on themes related to group identity (Kamau, 2013), group attraction (Keating et al., 2003) and affiliation (Lodewijkx & Syroit, 2001).

The varied reasons for hazing notwithstanding, little is known about the characteristics of either the instigators or victims. Campo et al. (2005) in a comprehensive review concluded: “*the extant literature is thin regarding the characteristic of those participating...*” and “*beliefs, attitudes and norms regarding hazing have been understudied*” (p. 138). Since this report almost a decade ago, the knowledgebase remains essentially the same.

Hazing is associated with lower cohesiveness while performing team-related tasks (Van Raalte et al., 2007). Hazing is also more likely where there is weak organizational coherence (Renaud, 2010). The more severe the hazing initiation rite, the more severe is experienced dejection, depression and isolation (Lodewijkx et al., 2005). Self-identified characteristics related to hazing propensity include fraternity/sorority membership (where hazing is a considerable problem as well), high leadership status of the perpetrator and incorrect belief that hazing strengthens team cohesion (see Campo et al, 2005). These findings indicate that the factors predisposing to hazing are amenable to intervention. Furthermore, they underscore the importance of taking into account the team culture so as to devise strategies that provide an attractive alternative to hazing aimed at advancing team development. Education alone is not an effective deterrent.

5. CONCEPTUAL FRAMEWORK

Hazing has many predisposing factors, and at the team level, three main sources of causation:

1. Team coaching/environment style and attitudes related to overseeing and enforcing behavior standards of team members
2. Propensity of team members to perpetrate and participate in hazing
3. Susceptibility of new team members that render them a target

The strategy in this research conceptualizes these sources of hazing risk as three correlated dimensions to form scales from which a second-order “super” scale is also derived. The conceptual model is shown below.

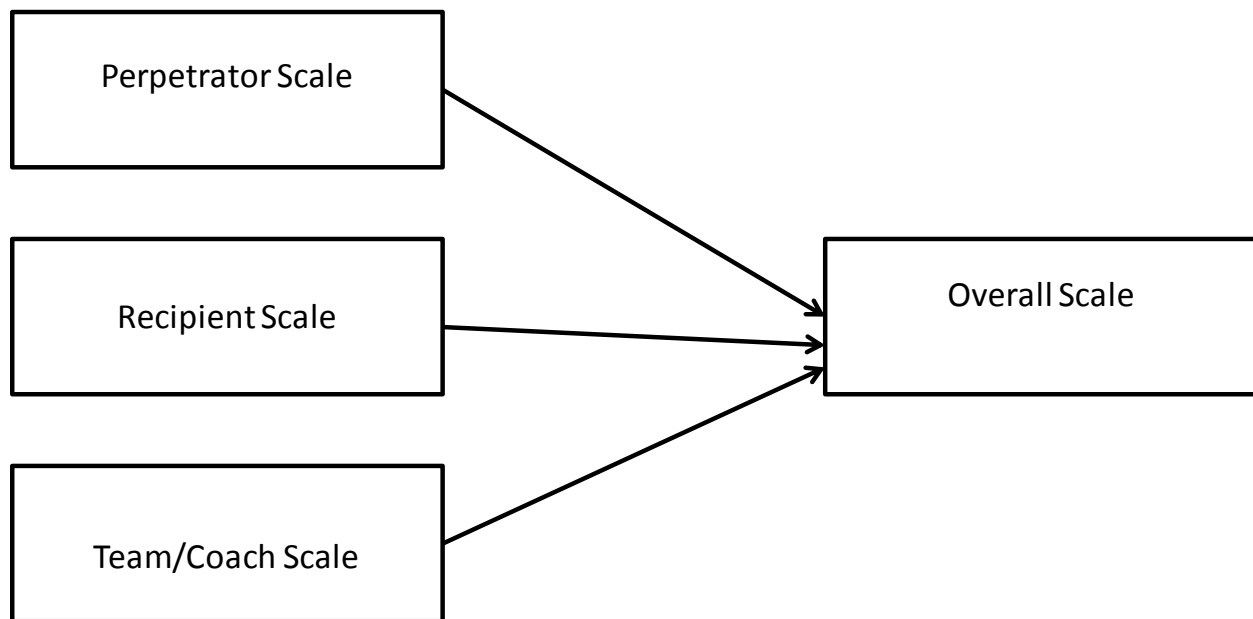


Figure 1. Conceptual Framework of the Hazing Prevention Index

6. METHODOLOGY AND DATA COLLECTION

This project provisionally developed and psychometrically validated the *Hazing Prevention Index*. The project consisted of two stages:

First, a panel consisting of eleven (11) college coaches was assembled in a teleconference interview group charged with the task of identifying the characteristics associated with hazing. This panel of experts included coaches from Division I, II and III NCAA member institutions spanning various sports. The meetings focused on identifying the characteristics related to hazing propensity for inclusion in the Hazing Prevention Index. The product of the meeting was a list of topics and items that the coaches deemed important. Examples of characteristics are: membership in a fraternity/sorority, beliefs about the normativeness of hazing, disposition toward using aversive or punishing behavior to influence others, and belief that hazing promotes team loyalty. The meeting concluded with a request that the coaches generate up to five “bullet” concepts or topics denoting additional characteristics. The composite list was then returned to the coaches with the instruction that they rate each item on a scale of 1-5 to signify its importance.

Additionally, a separate panel of 100 NCAA coaches participated in a web-based survey sharing their perception on the factors that contribute to hazing. Both groups of coaches provided invaluable insight into how to prepare the prototype Hazing Prevention Index. In the next step, items were formatted into a 5-point Likert rating scale. A rating of 3 is neutral; that is, the respondent neither agrees nor disagrees with the particular statement. Ratings of 4 and 5 denote increasing propensity toward the particular hazing behavior whereas scores of 2 and 1 denote increasing propensity toward desisting hazing behavior. Half the items had reverse phrasing (and scoring) to avert automatic responses. Thus, attention effort has to be directed at each item. None of the items contained the term “hazing” because its negative connotation biases responding toward socially desirable, albeit inaccurate, ratings.

The provisional set of items comprising the Hazing Prevention Index was administered to 355 college student-athletes representing thirteen college sports at thirty-six institutions, across all three divisions. Tables 1-4 on the following page summarize the characteristics of the sample including gender, division, sport played and year in school (tables divided by Freshmen (n=129), Sophomore (n=98), Junior (n=76) and Senior (n=47).

Exploratory factor analysis (EFA) was performed to provisionally establish each scale. Items which load .4 or higher on the scale were retained and the remainder were deleted from further instrument development. The complement of 47 items organized into three scales was also submitted to factor analysis to learn whether the overall item set comprises a “super” factor. Following derivation of the three primary scales and the super factor scale, psychometric analyses were conducted to document their properties, including internal reliability and validity.

Table 1. Freshmen Year Participant (n=129)

<i>Freshman (year=1)</i>	Female D1	Female D2	Female D3	Female Other	Male D1	Male D2	Male D3	Male Other	
Baseball	0	0	0	0	4	0	1	0	5
Basketball	0	6	0	0	0	0	0	0	6
Field Hockey	6	0	0	0	0	0	0	0	6
Golf	0	0	0	0	0	0	2	0	2
Gymnastics	0	0	7	0	0	0	0	0	7
Lacrosse	0	0	0	0	0	0	4	0	4
Soccer	8	5	8	9	15	3	18	0	66
Softball	0	11	4	0	0	0	0	0	15
Swimming	1	0	0	0	0	0	0	0	1
Tennis	0	0	0	0	0	5	0	0	5
Volleyball	0	7	1	0	0	0	0	0	8
Water Polo	0	0	0	0	0	1	0	0	1
Wrestling	0	0	0	0	0	3	0	0	3
TOTAL	15	29	20	9	19	12	25	0	129

Table 2. Sophomore Year Participant (n=98)

<i>Sophomore (year=2)</i>	Female D1	Female D2	Female D3	Female Other	Male D1	Male D2	Male D3	Male Other	
Baseball	0	0	0	0	0	0	0	0	0
Basketball	0	8	0	0	0	0	0	0	8
Field Hockey	4	0	0	0	0	0	0	0	4
Golf	1	0	0	0	0	1	2	0	4
Gymnastics	0	0	11	0	0	0	0	0	11
Lacrosse	0	0	0	0	0	0	0	0	0
Soccer	4	4	8	3	11	5	8	1	44
Softball	0	15	2	0	0	0	1	0	18
Swimming	0	0	0	0	0	0	0	0	0
Tennis	0	0	0	0	0	6	0	0	6
Volleyball	0	2	0	0	0	0	0	0	2
Water Polo	0	0	0	0	0	0	0	0	0
Wrestling	0	0	0	0	0	1	0	0	1
TOTAL	9	29	21	3	11	13	11	1	98

Table 3. Junior Year Participant (n=76)

<i>Junior (year=3)</i>	Female D1	Female D2	Female D3	Female Other	Male D1	Male D2	Male D3	Male Other	
Baseball	0	0	0	0	0	0	0	0	0
Basketball	0	8	0	0	0	0	0	0	8
Field Hockey	7	0	0	0	0	0	0	0	7
Golf	0	0	0	0	0	0	3	0	3
Gymnastics	0	0	1	0	0	0	0	0	1
Lacrosse	0	0	0	0	0	0	0	0	0
Soccer	3	6	8	1	11	5	7	0	41
Softball	0	7	1	0	0	0	0	0	8
Swimming	0	0	0	0	0	0	0	0	0
Tennis	0	0	0	0	0	2	0	0	2
Volleyball	0	6	0	0	0	0	0	0	6
Water Polo	0	0	0	0	0	0	0	0	0
Wrestling	0	0	0	0	0	0	0	0	0
TOTAL	10	27	10	1	11	7	10	0	76

Table 4. Senior Year Participant (n=47)

<i>Senior (year=4 or 5)</i>	Female D1	Female D2	Female D3	Female Other	Male D1	Male D2	Male D3	Male Other	
Baseball	0	0	0	0	0	0	0	0	0
Basketball	0	3	0	0	0	0	0	0	3
Field Hockey	0	0	0	0	0	0	0	0	0
Golf	0	0	0	0	0	0	1	0	1
Gymnastics	0	0	3	0	0	0	0	0	3
Lacrosse	0	0	0	0	0	0	0	0	0
Soccer	2	3	4	0	4	1	4	1	19
Softball	0	11	4	0	0	0	0	0	15
Swimming	0	0	0	0	0	0	0	0	0
Tennis	0	0	0	0	0	0	0	0	0
Volleyball	0	5	0	0	0	0	0	0	5
Water Polo	0	0	0	0	0	0	0	0	0
Wrestling	0	0	0	0	1	0	0	0	1
TOTAL	2	22	11	0	5	1	5	1	47

7. FINDINGS

Three scales were derived to compose the Hazing Prevention Index. The Perpetrator Scale consists of 24 items, all having item loadings > .40 and accounting for 55% of factor variance. The Recipient Scale consists of 13 items, all having item loadings > .40 and accounting for 61% of factor variance. The Team/Coach Scale contains 10 items, all having item loadings >.40 and accounting for 41% of factor variance. The scales are presented in Appendix A.

Exploratory factor analysis conducted on the entire item set yielded a major factor accounting for 31% of factor variance. The scale contains 35 items having item loadings >.40.

Table 5 summarizes the fit statistics of the three primary scales and the super factor scale.

Table 5. Confirmatory Factor Analysis Fit Statistics:

	Perpetrator	Recipient	Team/Coach	Super Factor
RMSEA	.109	.096	.123	.096
SRMR	.059	.037	.067	.055
CFI	.850	.942	.860	.829
Cronbach's Alpha	.94	.95	.81	.97

The results indicate that each scale has good model (unidimensionality) – data fit on at least two of four indexes (shown in bold font) to satisfy criteria of acceptable fit. Notably, Chronbach's alpha is in the outstanding range, thereby demonstrating internal consistency of the items on all scales.

It is also noteworthy that there is strong coherence among the items on key facets of hazing, namely humiliation, initiation ritual and team cohesiveness. Strong correlations between pairs of items are observed.

- Causing humiliation in new teammates strengthens their team commitment AND A prank causing embarrassment can increase motivation in new teammates (.85 correlation)
- Initiation rituals should remain a tradition in competitive sport AND It is reasonable that freshmen complete an initiation ritual similar to their upperclassmen (.80 correlation)
- Cohesive teams usually have initiation rituals AND Initiating new team members with some type of joke is standard in competitive sports (.80 correlation)

8. IMPLICATION FOR CAMPUS-LEVEL PROGRAMMING

The Hazing Prevention Index is an efficient tool to protect the safety of student athlete from physical injury or emotional disturbances resulting from this traditional initiation practice. Employing the *Hazing Prevention Index*, institutions and athletic departments can affirm a positive proactive approach to prevent hazing and its negative legal and financial consequences. Three examples of applications of the Hazing Prevention Index are:

- **Team-level monitoring (*snapshot*):** Coaches can assess team's risk of hazing prior to the season. This helps staff determine the level of vigilance and need for intervention, including tools for prevention (e.g. informing the coach to add a new team-building activity during pre-season).
- **Team-level monitoring (*longitudinal*):** Coaches can track risk level over time. As team membership is often multi-year (where potential recipients one year are potential perpetrators the next), it is valuable to understand if and how the team culture is changing through the coach's monitoring (and intervention).
- **Institutional alert system:** Athletic department officials are able to monitor teams as well as identify high risk individuals. From this information, the administration is able to be notified of risk levels prior to a negative event.

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