

Benchmarking Outdoor Expeditionary Program Risk Management Strategies

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In 2003, the University of Utah and the National Outdoor Leadership School (NOLS) completed a study that developed a risk management taxonomy in the outdoor adventure industry and assessed how different outdoor expeditionary programs (OEPs) managed risk (Szolosi, Sibthorp, Paisley, & Gookin, 2003). By unifying the language around risk, the goal was that OEPs would be better able to understand how their risk management strategies compared to that of similar organizations; however, to do so, they needed empirical data against which to compare themselves. The study ultimately resulted in the identification and definition of 21 risk management strategies and 15 categories of hazards that OEPs typically encounter. OEPs then completed a survey in which they ranked what strategies they use to manage each hazard. Among the key findings were that larger organizations (defined by budget and user field days) tend to employ more risk management strategies than smaller organizations do. The survey also produced a ranked list of how frequently OEPs use each strategy.

Since then, the outdoor industry has largely maintained a focus on the staff team, participants, environment, and equipment as the central areas in which risk can be managed (Dallat, Salmon, & Goode, 2015). Attention to these areas can be seen, for example, in the Meyer and Williamson (1998) accident matrix, which looks at potentially unsafe conditions, potentially unsafe acts, and potential errors in judgment. The accident matrix continues to be widely taught, and one can draw parallels between the categories it attends to and the 2003 survey hazards. The purpose of this study was to update the findings to understand how the use of risk management strategies has changed. A second goal was to identify OEPs' contemporary concerns.

Method

We first reviewed the 21 risk management strategies and 15 field-based hazards identified in the original study through a Delphi process (Paisley, Sibthorp, & Szolosi, 2003). The Delphi process was used to build consensus among a panel of experts on the main OEP field-based hazards and the strategies most commonly used to mitigate them. Based on feedback from a purposive sample of risk management experts, minor changes were made to the wording of the survey (e.g., "Participant misbehavior" was changed to "Participant behavior"). Two of the original hazards were deleted because subsequent feedback suggested these hazards were captured elsewhere in the survey. One risk management strategy was changed to reflect more contemporary vocabulary.

We contacted four organizations to which North American OEPs commonly belong: the Association for Experiential Education (AEE), the Association of Outdoor Recreation and

Education (AORE), the Wilderness Education Association (WEA), and the Wilderness Risk Management Conference (WRMC). Each of these organizations received information about the study and forwarded the survey to their respective members/mailling lists. The process duplicated the original procedure.

To analyze the data, we employed cluster analysis to empirically generate groups of OEPs that shared similar characteristics using demographic data. Cluster analysis is a statistical technique that creates groups based on, in this case, data such as number of field days, remoteness of operating area, budgets and organizational mission. We compared risk management strategies by group to determine which strategies were most used by each group type. While the survey showed how each hazard is managed (e.g., environmental hazards are managed by field staff training), our main interest was in understanding how reliant each group is on specific risk management techniques. In addition, we tabulated concerns that OEPs have for the upcoming field season and how they plan to manage risk in 2017.

Results

We obtained a convenience sample of 262 participants after removing surveys that were incomplete. The cluster analysis resulted in four somewhat distinct groups (see Table 1 for characteristics). Participants reported that their programs offer backpacking, climbing, paddling, winter sports, rafting, mountaineering, sailing, cycling, trapping, caving, stand-up paddleboarding (SUP), surfing, high ropes, horse-packing, canyoneering, primitive skills, trail maintenance, dog sledding, scuba, and cultural immersion.

A graph of risk management strategies by frequency of use by cluster is presented in Figure 1. A table showing the most commonly used risk management strategies is shown in Table 2. Survey respondents reported that they are most concerned in the 2017 season with managing the following hazards: (1) Risk Inherent in the Program, (2) Environment, (3) Driving/Transportation, (4) Lack of Participant Supervision, and (5) Staff Performance.

Table 1
Characteristics of Clusters

Cluster 1: Camps and campus recreation	Cluster 2: Large OEPs	Cluster 3: Guiding companies	Cluster 4: Therapeutic programs
<ul style="list-style-type: none"> • 33% of sample • more recreational-oriented missions • less field staff experience • more open participant selection • operating areas closer to assistance 	<ul style="list-style-type: none"> • 44% of sample • longer duration staff trainings • greater years of operation • more experienced field instructors • operate in more remote terrain • report more field days (they are bigger) 	<ul style="list-style-type: none"> • 14.4% of sample • shorter staff training • more experienced field staff • more recreational programming • more remote field sites • more restrictive insurance 	<ul style="list-style-type: none"> • 8.5% of sample • more therapeutic-oriented mission • longer staff training • larger number of field days • more selective process for enrollment (participant selection) • lower student to instructor ratio

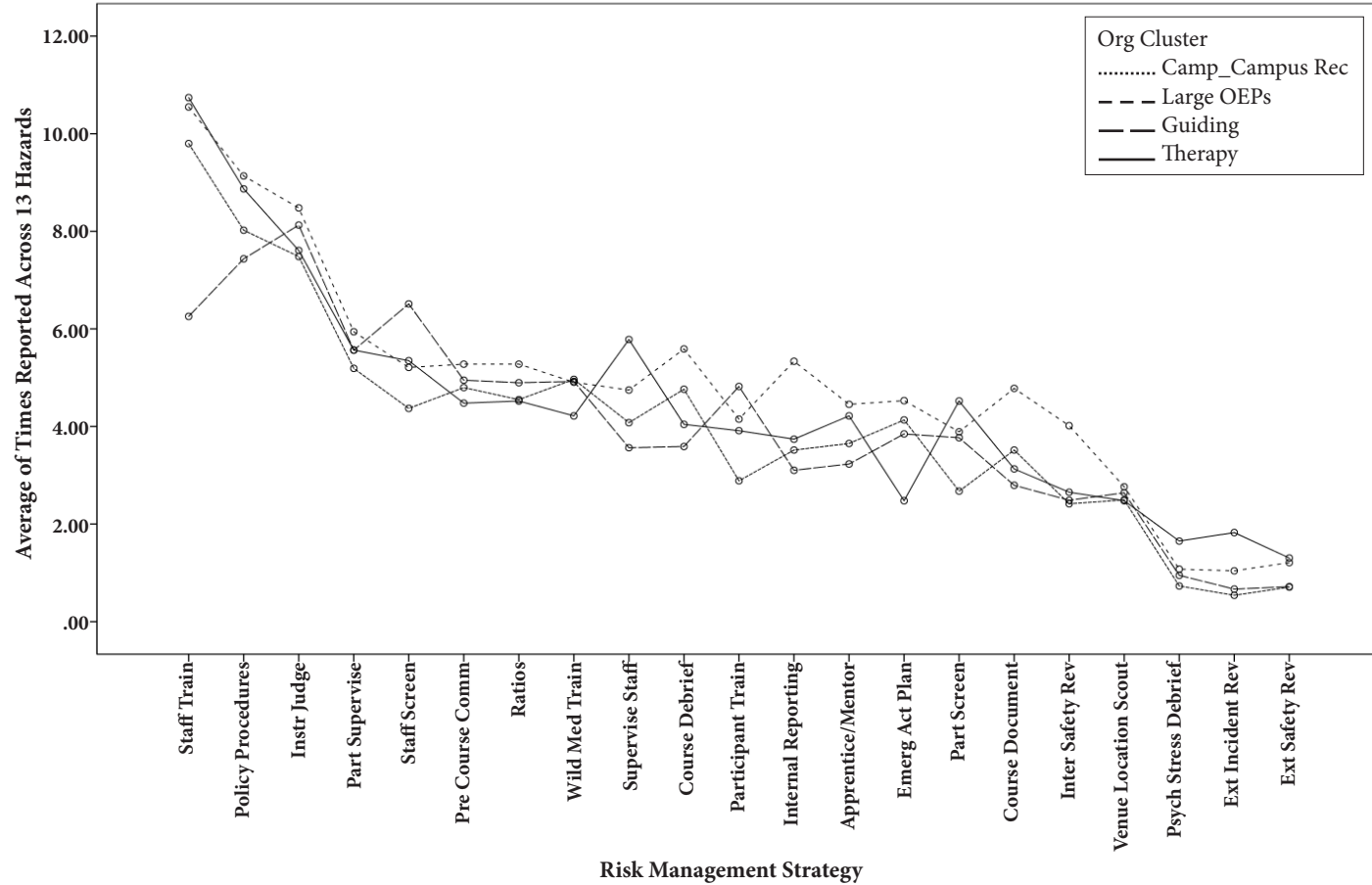


Figure 1. Common risk management strategies by cluster.

Table 2*Five Most Common Risk Management Strategies by Year*

2003	2016	Essential*	Anticipated 2017**
Field Staff Training (75.1%)	Field Staff Training (78.4%)	Field Staff Training	Field Staff Training
Policies and Procedures (73.3%)	Policies and Procedures (69.6%)	Policies and Procedures	Policies and Procedures
Field Staff (Instructor) Judgment (73%)	Field Staff (Instructor) Judgment (65.3%)	Field Staff (instructor) Judgment	Field Staff (instructor) Judgment
Supervision of Participants (62%)	Supervision of Participants (45.9%)	Wilderness Medicine Training	Wilderness Medicine Training
Pre-Course Communication (57.1%)	Pre-Course Communication (42.9%)	Course Debriefings	Course Debriefings
Field Staff Training (75.1%)	Field Staff Training (78.4%)	Field Staff Training	Field Staff Training

* Essential strategies most frequently used by OEPs that used the least overall strategies, which suggests OEPs may be most dependent upon them or that they are most essential to managing risk

** Percentages are not included because data from anticipated risk management strategies were not comparable with the 2003 and 2016 data.

Discussion

The overall results from the survey show that OEPs manage risk in ways that are more similar than they are different, and that how they manage risk has remained reasonably unchanged since the 2003 study. Between the two surveys, the top five strategies used was identically ranked. Only in the essential and future strategies did wilderness medicine training rank fourth, dropping participant supervision off the list. Based on the demographic data, we named the four clusters camps and campus recreation, large OEPs, guiding, and therapeutic programs. While some variations existed, the results show that they trended together in terms of which strategies were most frequently employed. However, a limitation of the study was that we did not obtain information that would explain why discrepancies between OEPs exist. Therefore, any explanations we offer are speculative in nature.

It seems likely that the needs of the organization and its mission determine how it uses risk management strategies. Campus recreation programs, for example, are tasked with serving the college community and tend to have open enrollment, which differs from therapeutic programs, which serve special populations and employ more restrictive participant screening to assess whether they will be able to meet their participants' needs. Guiding companies are more likely to hire staff with previous experience and credentials and may therefore rely less on staff training as compared to other types of OEPs. Large OEPs, which are characterized by having more field days and larger budgets, may be able to afford to have larger staff sizes and consequently are better equipped to employ a large variety of risk management strategies.

This survey captures a snapshot of how OEPs employ risk management strategies, which is useful for comparing trends over time. That the results have largely remained unchanged may be neither a good nor bad outcome, but rather can be viewed as a starting point for discussions. Dallat et al. (2015) suggested that systems thinking would be an important addition to risk management. Nonetheless, it is impossible to identify the best way to manage risk given that it is a moving target dependent upon ever-changing circumstances. What matters is that OEPs continually engage with the subject, asking why and whether strategies should change.

References

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