



# Search and Rescue Victims – An Evaluation of SAR Victim Demographics and the Safety Benefit of Group Travel

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## Background

- Salt Lake County (SLCo) is located in northern Utah with a population of over 1 million. The mountains in SLCo have many hiking and mountain biking trails, multiple areas for rock and ice climbing, plentiful ski and snowboard terrain, and many peaks that exceed 3,300 meters (11,000 feet). The rugged terrain, nearby population, and ease of access to wilderness areas facilitate a high frequency of incidences that require search and rescue (SAR) assistance.
- Little research on SAR victims has been done outside of the National Park Service (NPS), whereas fairly extensive research has been done on NPS SAR victims. Resulting data has shaped the current image of SAR victim risk factors by studying their age, gender, activity, location of residence, chief complaint, weather, experience, time of year, and partner/group travel.
- The research presented here contributes two new areas within SAR victim research: non-NPS SAR victims, and a closer look at how group travel correlates within backcountry incidents that require SAR.

## Objectives

- Compare demographics of SLCo SAR victims to NPS victims
- Identify group size of SAR victims
- Utilize trail usage data to obtain proportionate data regarding group size

## Methods

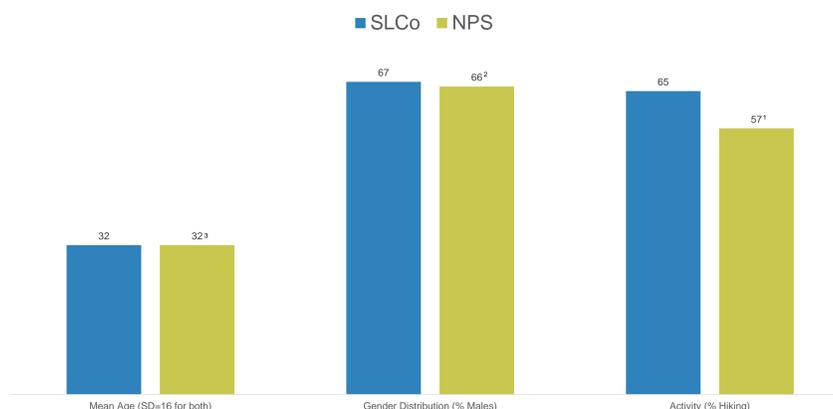
- Retrospective analysis of SAR victims in Salt Lake County (SLCo) from 2011 to 2013
  - Measures of central tendency for age, time of year, and group size
  - Frequency analysis for gender, activity, location of residence, and chief complaint
  - Comparison of NPS SAR victims
- Observational trailhead study of group size during the 2013 peak rescue season (June – September) in SLCo is compared to the retrospectively studied cohort using chi-square



## Results

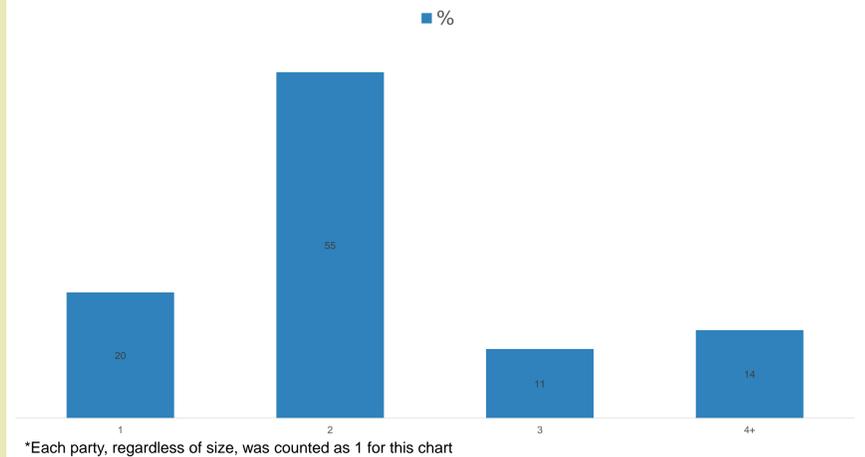
- Mean age of SLCo SAR victims was 33 (SD ± 16)
- There were 102 males (67%) and 45 females (33%)
- The most common activity was hiking (65%)
- The majority were residents of SLCo (81%)
- Thirty victims (20%) were travelling alone in the retrospective study of SAR victims
  - 24% were travelling alone in the trailhead observational study of hikers
- Of the victims that were with a partner or group, at least one other person in the group required assistance from SAR 61% of the time
- There was no significance in risk between partner/group travel and solo travel ( $\chi^2 [1, n = 596] = 0.73, p = 0.39$ )
- Mean time that SAR was notified to respond for assistance was 1643 (SD ± 5 hours)

SLCo & NPS SAR Victim Comparison



## Results continued

Size Of Group That Requested SAR Assistance in SLCo\*



## Conclusions

- SLCo SAR victims demographics were similar to National Park SAR victims, which suggests that risk factors contributing to SAR incidents could be similar whether in the National Parks, or in county wilderness areas
- Group size did not correlate with proportional frequency of SAR incidences

## Discussion

- Solo wilderness travel may not be as risky as commonly perceived, when high risk in wilderness activity is, in part, defined as: an activity that resulted in requiring SAR assistance
- Additional factors may contribute to behaviors that result in incidents requiring SAR assistance such as: lack of preparedness and perception of wilderness dangers

## References

1. Boore, S.M., & Bock, B. (2013). Ten years of search and rescue in Yosemite National Park: Examining the past for future prevention. *Wilderness Environmental Medicine, 24*, 2-7
2. Heggie, T.M., & Heggie, T.W. (2009). Search and rescue trends associated with recreational travel in the US National Parks. *Journal of Travel Medicine, 16*, 23-27
3. Hung, E.K., & Townes, D.A. (2007). Search and rescue in Yosemite National Park: A 10-year review. *Wilderness Environmental Medicine Journal, 18*, 111-116