



Additional training opportunities in team science could support the degree to which professionals in CSD engage in collaborative research.

Perceptions of Team Science in Speech-Language Pathology and Audiology

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INTRODUCTION

- *Team Science* refers to research collaboration across multiple disciplines (Wood et al., 2021)
- Though interdisciplinary teaming is expected in clinical practice (American Speech-Language-Hearing Association, 2017), teaming in clinical translational research in communication science and disorders (CSD) has been studied to a lesser extent
- Cross-disciplinary collaborations may partially depend on several factors, including but not limited to training, perceived psychological risk, gender, and position/rank

PURPOSE

- The purpose of this study was to examine researchers' experiences in team-based science or collaborative research in CSD programs

METHODS

- Using Qualtrics, a 29-item survey was developed to assess engagement in collaborative research and self-perceptions of readiness, knowledge, and skills related to team science
- Doctoral students, postdoctoral fellows, faculty and research scientists from 180 Council of Academic Programs in Communication Sciences and Disorders member programs were invited; 220 individuals responded
- Descriptive analyses were conducted to describe the extent to which researchers in CSD engage in collaborative research, perceptions of readiness, quality of teaming skills
- Analysis of variance was used to examine potential group differences in responses by groups differing in age group of focus, position, and type of institution
- An independent-samples *t* test was conducted to assess differences in several factors on team membership, prior training, and gender
- A chi-squared test of independence was used to examine the relation between training and membership in cross-disciplinary teams
- Content and natural language processing analyses of open-ended responses was conducted to identify major themes in advantages and challenges to collaborative research with Leximancer v4.5

RESULTS

- 48% Reported serving on an interdisciplinary research team; 57% reported relatively few co-authors (0-3), only 20% publishing with larger co-authorship teams (4-10)
- Though only 17% of respondents had engaged in team science training, a majority expressed positive beliefs and perceptions toward cross-disciplinary activities (83%)
- No significant group differences in the composite for the ten questions related to research orientation
- Female researchers ($M = 5.64, SD = 0.79$) indicated significantly lower psychological safety compared to male researchers ($M = 6.08, SD = 0.78; t(19.13) = 4.37, p = .05$)
- Faculty in non-academic and non-tenure track positions ($M = 5.26, SD = 0.95$) reported lower psychological safety than faculty in tenure-track positions ($M = 5.82, SD = 0.71; t(36.98) = 8.59, p = .006$)
- The rate of engagement in cross-disciplinary collaborative research was higher for participants with prior team science training ($M = 5.52, SD = 1.56$) than those without training ($M = 4.54, SD = 1.48; t(165) = -3.28, p < .001$)

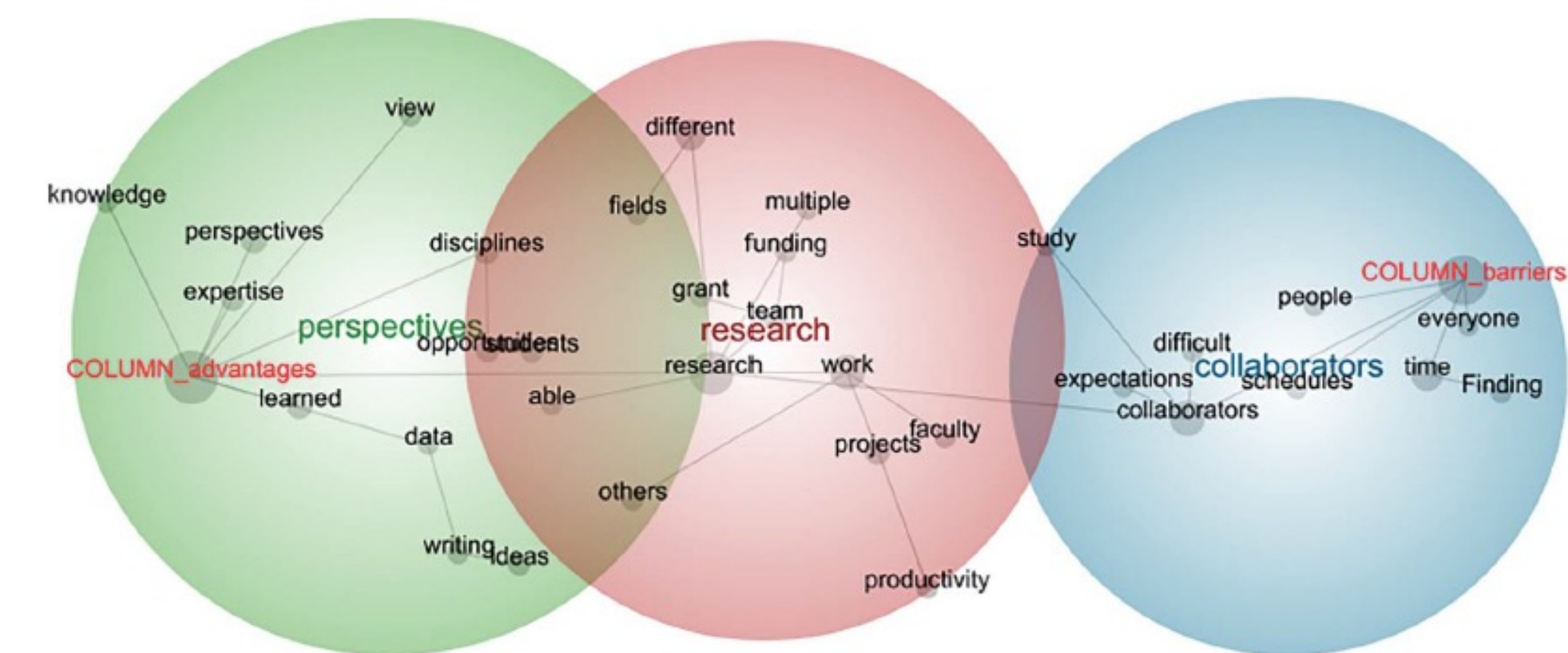


Figure 1. Thematic analysis of free-text responses. The circles depict themes in responses related to advantages and barriers to team-based research. Each word, depicted alongside a shaded circle, indicates a word that frequently occurred in free-text responses. The size of the circle reflects the frequency of occurrence with larger circles indicating more frequently occurring words or concepts than smaller circles.



DISCUSSION

- More research is needed to identify ways to improve the execution of cross-disciplinary research practices in CSD and vet the underlying causes of the disconnect between research values and current practices
- Major themes of open-ended responses suggest collaborative research efforts have a high pay off with much to offer scientists in CSD
- Due to group differences in psychological safety, additional efforts may be necessary to ensure that imbalances in the power structure of members are not allowed to dissuade members from actively contributing to team activities