

Potential effects of SPAN for adolescents with social anxiety incorporating pet dogs

Introduction

- Studies estimate 1 in 3 people impacted by social anxiety, disproportionately affecting younger people (SA)¹
- Coaching interventions shown to be effective for promoting positive social participation²
- Animal-assisted interventions (AAI) can lead to increased community integration, enhanced self-esteem & improved psychological well-being³

Purpose: Investigate potential effects of brief 4-week virtual coaching program *Social Participation & Navigation* (SPAN; spanprogram.com) promoting social participation in adolescents with SA incorporating pet dogs

Methods

Participants: 8 adolescents ages 13-17 (15.1±1.5 years) with dogs

- 6 female; 6 White; 1 Hispanic/Latina
- >50 on Social Anxiety Scale for Adolescents (SAS-A)⁴ (52-74 & 66.8±6.8)

SPAN Questionnaire: Self-rated

- Confidence & involvement in social participation areas
- Confidence in SPAN-specific skills

Goal Activity Participation Scale (GAPS): Self rated involvement, confidence, & satisfaction related to goal

Data Analysis: SPAN Questionnaire & GAPS

- Calculated percent of maximum possible (POMP) scores & standard deviation (SD) for pre & post measures
- Effect sizes (Cohen's D) & Wilcoxon signed-rank test to assess

 change pre to post Content analysis to identify goals, supports & challenges 	Type of Goal	Goals completed	Goals planned	100		GAPS Pre
Coaching Program Four 45-60 minute virtual coaching sessions led by graduate OT	Meeting & conversing	2	2	90 80		
student coaches working on goal development, planning & achievement	Managing anxiety & frustration	1	1	70 60		
 Pre Informed consent & SPAN pre-questionnaire Building rapport, intro to SPAN web-app, discussing social 	Group Interaction	Δ	0	50 40		
 participation & goal setting, developing a goal GAPS form, goal refinement, generic & dog specific 	Total	7	3	30 20		
2 strategies, relevant tips & topics	Common supports: Dog (7), having close friend (7), personal strengths (6), mindfulness (4) Common challenges: Schedule (7), personal challenges (6),			10 0		
 Reviewing goal progress, revising plan, reviewing strategies Discuss goal progress, plan for future, GAPS form, SPAN post- 				Effect Size	Involvement 3.31	Sati
4 questionnaire	anxiety (5), lack of confidence (4), not knowing people (4), living situation (4)				0.01	

Results									
Scores	SPAN Pre Mean (SD)	SPAN Post Mean (SD)	Effect size (Cohen's d)	Wilcoxon signed rank (p-value)					
Overall Social Participation									
Involvement	62.2 (13.1)	64.8 (12.8)	0.20	0.06					
Confidence	60.0 (14.0)	70.5 (14.0)	0.75	0.02					
Home & Family									
Involvement	65.3 (19.2)	63.4 (15.3)	-0.11	0.92					
Confidence	62.2 (14.1)	70.9 (14.7)	0.61	0.05					
School									
Involvement	60.0 (13.8)	61.8 (16.5)	0.12	0.67					
Confidence	56.8 (15.1)	65.7 (17.2)	0.55	0.04					
Neighborhood & community									
Involvement	59.0 (16.3)	64.2 (13.7)	0.35	0.05					
Confidence	58.3 (18.1)	70.4 (15.0)	0.73	0.03					
SPAN Skills Confidence Scores									
Overall	69.0 (8.2)	79.8 (7.9)	1.35	0.01					
Goal planning	69.5 (8.3)	83.5 (12.4)	1.36	0.02					
Self-regulation	65.8 (14.3)	76.7 (6.9)	1.02	0.04					
Reciprocal communication	73.1 (12.5)	80.0 (6.5)	0.72	0.05					

Effect sizes- small= ≤ 0.49 , medium= 0.5-0.79, large= 0.8-1.29, very large ≥ 1.3 ; *Wilcoxon-* p ≤ 0.05 bold & italicized

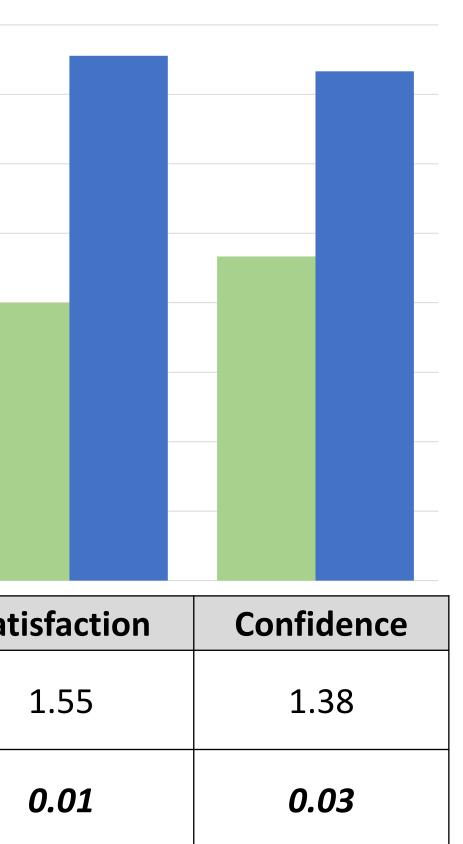


Discussion

Zachary Gould, OT/s, MS, Gary Bedell, PhD, OT, Emily Machado OT/s, Nicole Porter, OT, OTD, & Megan Mueller, PhD



Post



Consistent significant changes (p≤0.05) in confidence scores across all social participation domains

- Inconsistent changes across involvement scores Most significant changes in SPAN specific skills (overall, goal
- planning, self-regulation, & reciprocal communication) Most participants (7/8) were able to develop, plan, & execute a
- goal within 4 weeks
- One participant had final step of goal planned after program
- Significant changes & very large effect sizes in self-rated involvement, satisfaction, & confidence related to goals

Overall, findings in line with previous studies using similar design^{2,5}

- Inconsistent involvement scores potentially explained by busy schedule during school year, limited program duration & types of goals created (i.e., focus on community)
- Changes in confidence scores might be due to skills & strategies discussed & practiced during brief 4 week trial
- Significant changes in SPAN skills, & goal specific scores may be due to individualized approach to coaching program

Limitations & Future Directions

Limitations:

- Coaching program limited to 4 weeks
- Took place during winter months of school year
- Small sample size, lack of generalizability
- Challenges incorporating dogs within goals & strategies SPAN Questionnaire has limited psychometric evidence

Future Directions:

- Assess effects of longer program with larger sample
- Assess effects of program during other times of year
- Provide dog-specific resources & strategies
- Examine psychometric measures of SPAN questionnaire further
- Examine specific influence of relationship with dog on social anxiety & participation

References

- Jefferies, P., & Ungar, M. (2020). Social Anxiety in young people: A prevalence study in seven countries. PLOS ONE, 15(9).
- Wade, S. L., Bedell, G., King, J. A., Jacquin, M., Turkstra, L. S., Haarbauer-Krupa, J. & Narad, M. E. (2018). Social Participation and Navigation (SPAN) program for adolescents with acquired brain injury: Pilot findings. *Rehabilitation Psychology*, 63(3), 327.
- 3. McCune, S., Kruger, K. A., Griffin, J. A., Esposito, L., Freund, L. S., Hurley, K. J., & Bures, R. (2014). Evolution of research into the mutual benefits of human–animal interaction. Animal Frontiers, 4(3), 49-58.
- 4. La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. Journal of Abnormal Child Psychology, 26, 83-94.
- 5. Bedell, G., Porter, N., Cullen, M., Gould, Z., & Freeman, S. (in press). Social Participation And Navigation with Adolescent and Young Adult Brain Tumor Survivors: Usability and Potential Benefits. *Open Journal of Occupational Therapy*.

Contact

Zachary Gould (Zachary.gould@tufts.edu), Gary Bedell (gary.bedell@tufts.edu), Megan Mueller (megan.mueller@tufts.edu)