

Exploring the association between social problems and withdrawal in a pediatric brain tumour survivor population with the use of two social measures.

Authors

Leoanes Brahel Tatchinda, Yustine Carruyo, Sabrina Provencher, Pascale Chapados, Meng-Chuan Lai, Ute Bartels, Jacob Vorstman, Maru Barrera, Serge Sultan, Leandra Desjardins

Affiliations

Sainte-Justine University Health Centre, Department of Psychology, SickKids researchers, Brain tumour foundation of Canada, University of Montreal, McGill University

Background



Pediatric brain tumor survivors (PBTS) are at risk for challenges in social competence (social problems, isolation/social withdrawal; Hocking et al, 2014).

Measures of social skills may provide further information regarding challenges underlying difficulties in social competence (Nicole et al, 2015).

Here we investigate for the first time the association between PBTS social problems and withdrawal with a caregiver report of child social behaviors using the Social Skills Improvement System (SSIS; Gresham & Elliott, 1990) and Social Responsiveness Scale (SRS; Constantino et al, 2003).

Objective



To determine which of the two social measures, SRS or SSIS, provides a better understanding of social skill challenges potentially underlying PBTS social withdrawal/depression and social problems.

Results



Table 1: Pearson's correlation between CBCL and SSIS (Parent's perspective with T-scores)

	CBCL Withdrawn/Depressed T score	CBCL Social Problems T score
Social responsiveness measures	Correlation	Correlation
Communication	-.553**	-.337
Cooperation	-.398*	.009
Assertion	-.231	.037
Empathy	-.270	.007
Engagement	-.390*	-.076
Responsibility	-.473*	-.057
Self control	-.298	-.230

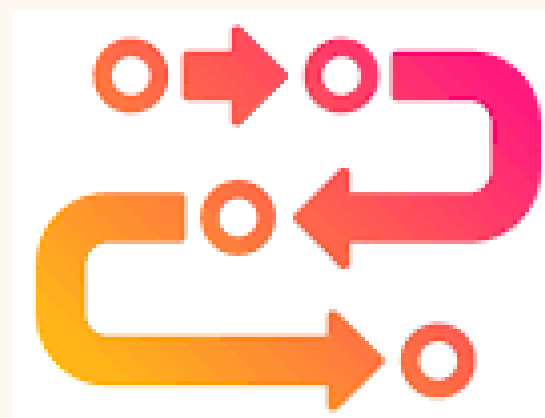
Note: * ps < .05 - ** ps < .01. - *** ps < .001

Table 2: Pearson's correlation between CBCL and SRS (Parent's perspective with T-scores)

	CBCL Withdrawn/Depressed T score	CBCL Social Problems T score
Social responsiveness measures	Correlation	Correlation
Social Awareness	.612**	.166
Social Cognition	.546**	.459*
Social Motivation	.713***	.401*
Social Communication	.779***	.562**

Note: * ps < .05 - ** ps < .01. - *** ps < .001

Methodology



Caregivers completed the Child Behavior Checklist (CBCL), SSIS, and SRS. CBCL dependent variable scales were Social Problems and Withdrawn/depressed.

Participants

27 Pediatric brain tumour survivors

Ages 9-17 years

M = 7.6 years from diagnosis

Diagnoses: Different types of brain tumors

Treatment: chemotherapy, radiotherapy

SSIS scales:

- Communication
- Cooperation
- Assertion
- Empathy
- Engagement
- Responsibility
- Self-control

SRS scales:

- Social awareness
- Communication
- Social cognition
- Social motivation

Note: Note: SSIS and SRS subscales were chosen based on previous PBTS social competence research (Emond et al, 2016).

References



- Constantino, John N.; Davis, Sandra A.; Todd, Richard D.; Schindler, Matthew K.; Gross, Maggie M.; Brophy, Susan L.; Metzger, Lisa M.; Shoushtari, Christiana S.; Splinter, Reagan (2003-08-01). "Validation of a Brief Quantitative Measure of Autistic Traits: Comparison of the Social Responsiveness Scale with the Autism Diagnostic Interview-Revised". *Journal of Autism and Developmental Disorders*. 33 (4): 427–433. doi:10.1023/A:1025014929212. ISSN 1573-3432. PMID 12959421
- Emond A, Edwards L, Peacock S, Norman C, Evangeli M. Social competence in children and young people treated for a brain tumour. *Support Care Cancer*. 2016 Nov; 24(11):4587-95. doi: 10.1007/s00520-016-3301-4. Epub 2016 Jun 16. PMID: 27312844.
- Gresham, F. M., & Elliott, S. N. (1990). *Social skills rating system: Manual*. American guidance service.
- Hocking, M. C., McCurdy, M., Turner, E., Kazak, A. E., Noll, R. B., Phillips, P., & Barakat, L. P. (2015). Social competence in pediatric brain tumor survivors: application of a model from social neuroscience and developmental psychology. *Pediatric blood & cancer*, 62(3), 375–384. https://doi.org/10.1002/pbc.25300.
- Nicole S, J. Dryburgh, Thomas H. Khullar, Aislinn Sandre, Ryan J. Piersram, William M. Bukowski & Melanie A. Dirks (2020) Evidence Base Update for Measures of Social Skills and Social Competence in Clinical Samples of Youth, *Journal of Clinical Child & Adolescent Psychology*, 49:5, 573-594, DOI: 10.1080/15374416.2020.1790381.

Conclusion

Findings

SRS, compared to the SSIS, may offer avenues for understanding PBTS challenges in social withdrawal/depression and social problems.

SRS subscales include aspects of social information processing (social cognition, awareness), which have been found to be impacted in PBTS (Emond et al, 2016).

The SRS is mostly used in autism to screen both for social cognitive and behavioral problems while the SSIS mostly screens for behavioral skills. The subscales used in the study are more related to social cognitive skills.

Future studies

Future studies of PBTS social competence may wish to include the SRS and other measures of social information processing.

Limitations

Standardized scores are available for SSIS subscales, but not SRS subscales.

A common limitation in PBTS studies are about small samples and heterogeneity in diagnosis.

