

# Social Networks: Patients With Social Anxiety Disorder and Healthy Controls

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## Background

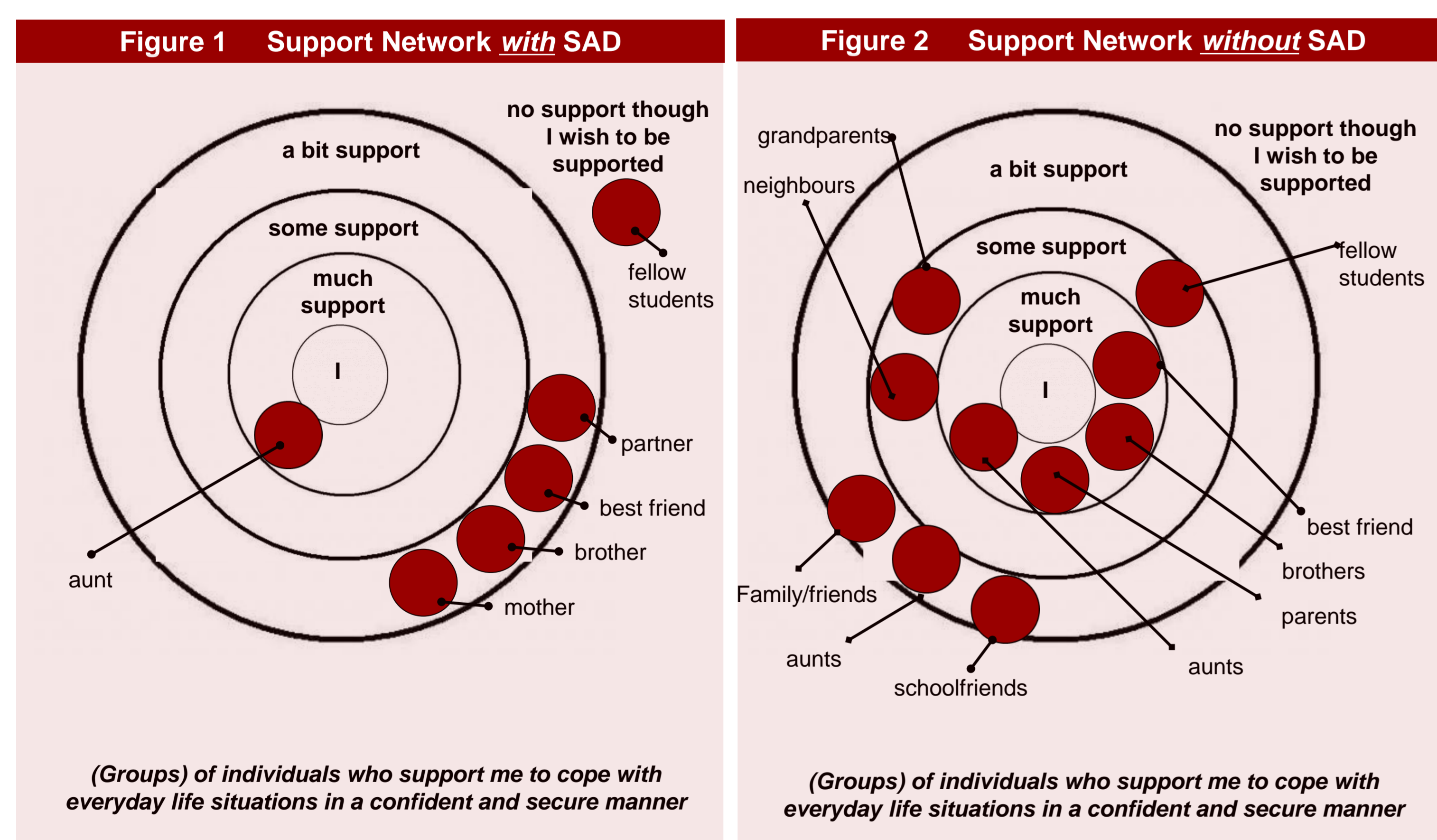
Social networks and social support play a central role in the physical and mental well-being, especially in social anxiety disorders (SAD).<sup>1,2</sup>

## Objective

To examine similarities and differences in social networks of persons with and without SAD.

## Hierarchical network mapping technique (HNMT)<sup>3</sup>

We used a disorder-specific HMNT version.<sup>4</sup> **Support social networks (SN)** included (groups of) individuals who support persons with and without SAD (Figure 1, 2; for support networks) to cope with everyday life situations in a confident and secure manner. **Anxiety social networks (AN)** included (groups of) individuals who stimulate anxious feelings or represent situations in which persons feel anxious. Persons with and without SAD placed wooden blocks for as many (groups of) people as they perceived of importance in their social life.



Note. Matched persons from both studies.

## Research questions

- RQ1:** Which social network characteristics will emerge in the SN and AN of persons with and without SAD?
- RQ2:** Do persons with and without SAD perceive positive and negative social support in their networks differently?
- RQ3:** How do social network characteristics and perceived social support predict social anxiety?

## Measures

**SN and AN:** HMNT.<sup>4</sup> **Positive social support:** 3 items:<sup>5,6</sup> e.g. „How much do you feel being understood by [person’s name]?“; Cronbach’s  $\alpha = .30$  to  $.75$ . **Negative social support:** 5 items:<sup>5,6</sup> e.g. „How much do you feel criticized by [person’s name]?“; Cronbach’s  $\alpha = .62$  to  $.72$ . **Social anxiety:** Liebowitz Social Anxiety Scale (LSAS-SR)<sup>7</sup>; Cronbach’s  $\alpha = .73$  to  $.90$ . **Systemic functioning:** Experiences in Social Systems Questionnaire (EXIS)<sup>8</sup>; Cronbach’s  $\alpha = .90$  to  $.94$ . **Interpersonal functioning:** Inventory of Interpersonal Problems (IIP-32)<sup>9</sup>; Cronbach’s  $\alpha = .83$  to  $.89$ .

## References

<sup>1</sup>Alden, L. E. et al. (2014). Relational processes in social anxiety disorder. In: J. W. Weeks (Ed.) *The Wiley Blackwell Handbook of Social Anxiety Disorder* (p.159-178). Oxford: Wiley-Blackwell. <sup>2</sup>Holt-Lunstad, J. et al. (2010). Social relationships and mortality risk: a meta-analytic review. *PLoS Med*, 7(7), e1000316. <sup>3</sup>Antonucci, T. C. et al. (2009). Convoys of social relations: An interdisciplinary approach. In V. L. Bengtson et al. (Eds.), *Handbook of theories of aging* (pp. 247-260). New York: Springer. <sup>4</sup>Hunger, C. et al. (submitted). Support and anxiety social networks in patients with social anxiety disorder. <sup>5</sup>Bertera, E. M. (2005). Mental health in U.S. adults: The role of positive social support and social negativity in personal relationships. *Journal of Social and Personal Relationships*, 22(1), 33-48. <sup>6</sup>Sherman, C. W. et al. (2013). Dementia Caregiving in the Context of Late-Life Remarriage. *Journal of Marriage and Family*, 75(5), 1149-1163. <sup>7</sup>Rytwinski, N. K. et al. (2009). Screening for social anxiety disorder with the self-report version of the Liebowitz Social Anxiety Scale. *Depression and Anxiety*, 26(1), 34-38. <sup>8</sup>Hunger, C., et al. (2016). Experience in Personal Social Systems Questionnaire (EXIS). *Family Process*. <sup>9</sup>Thomas, A. et al. (2011). IIP-32: Entwicklung, Validierung und Normierung einer Kurzform des Inventars zur Erfassung interpersonaler Probleme. *Diagnostika*, 57(2), 68-83.

## Sample

**42 patients with SAD** (SCID;  $M = 37$  years,  $SD = 14$ ) and **39 persons without mental disorders** (SCID;  $M = 36$ ,  $SD = 15$ ); matched for age, gender, education, occupation, civil status. Persons with SAD showed higher social anxiety (LSAS-SR:  $d = 4.34$ ), worse systemic and interpersonal functioning (EXIS:  $d = 1.80$ ; IIP-32:  $d = 2.70$ ). All patients with SAD, but only half of those without SAD, named an AN.

## RQ1: Network characteristics in SN and AN

Table 1 Network characteristics

	Persons without SAD		Patients with SAD		t	p	d
	M	SD	M	SD			
<b>Network total size</b>							
SN	22	13	11	8	-5.07 (79)	.000	1.17
AN - all (n = 81)	106	383	150	330	Z = 5.63	.000	a
- with AN (n = 62)	206	521	150	330	-0.52 (60)	.608	0.14
<b>Network composition (% of size)</b>							
SN Private systems	83.33	12.5	83.5	21.0	-0.09 (68)	.928	0.06
Professional systems	13.6	11.4	9.2	16.1	-1.41 (79)	.163	0.37
AN Private systems	17.5	34.2	38.3	32.7	2.79 (79)	.006	0.62
Professional systems	21.4	37.5	29.1	30.7	1.02 (79)	.310	0.24

Note. SN = Support Network; AN = Anxiety Network.

<sup>a</sup>Due to the non-parametric test, no effect size could be calculated.

## RQ2: Social support in SN and AN

Table 2 Positive and negative social support

	Persons without SAD		Patients with SAD		t	p	d
	M	SD	M	SD			
<b>Positive social support (total network)</b>							
SN	3.61	0.33	3.30	0.43	-3.61 (79)	.001	0.81
AN - all (n = 81)	0.86	0.95	2.01	0.05	6.74 (79)	.000	1.60
- with AN (n = 62)	1.86	0.59	2.01	0.50	2.28 (60)	.026	0.62
<b>Negative social support</b>							
SN	1.47	0.23	1.75	0.32	4.60 (79)	.000	1.02
AN - all (n = 81)	1.14	1.19	2.21	0.59	5.10 (79)	.000	1.23
- with AN (n = 62)	2.22	0.56	2.21	0.59	-0.02 (60)	.986	0.02

Note. SN = Support Network: 1 = not at all; 4 = very much; AN = Anxiety Network: 1 = not at all; 4 = very much.

## RQ3: Prediction of social anxiety (persons without SAD)

Results showed the prediction of social anxiety in the SN of persons without SAD by network size and perceived negative social support in the SN. However, there was no significant (interaction) predictor of social anxiety in the AN.

Table 3 Regression results predicting social anxiety in the support social network (SN)

	LSAS-SR			SIAS			SPS		
	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
<b>Model 1</b>									
Network size	-17.84	3.78	-.47**	-8.88	2.06	-.44**	-7.06	1.82	-.40**
<b>Model 2</b>									
Network size	-13.40	3.79	-.35**	-5.89	2.03	-.29**	-5.13	1.82	-.29**
Positive social support	-1.51	3.88	-.04	-1.35	2.05	-.07	0.14	1.88	.01
Negative social support	13.51	3.84	.36**	8.23	2.05	.40**	6.41	1.88	-.36**

Note. LSAS-SR:  $R^2 = .22$  model 1,  $\Delta R^2 = .12$  ( $p < .000$ ) model 2;  $\Delta R^2 = .01$  ( $p > .05$ ) model 3; SIAS:  $R^2 = .19$  model 1,  $\Delta R^2 = .16$  ( $p < .000$ ) model 2,  $\Delta R^2 = .01$  ( $p > .05$ ) model 3; SPS:  $R^2 = .16$  model 1,  $\Delta R^2 = .12$  ( $p < .000$ ) model 2,  $\Delta R^2 = .01$  ( $p > .05$ ) model 3. Model 3: No interaction predictor revealed significance.

\* $p < .05$ . \*\* $p < .01$ .

## Discussion

**HNMT can detect differences in the social networks of persons with and without SAD.** These result may contribute to a more differentiated understanding of interactional aspects in SAD. They point to the important role of significant others for physical and mental well-being. **Limitations:** Self-report design, small sample size, no disorder-specific controls (e.g. depressive disorder). **Future research:** Replications with controls, validation with external measures.

## Contact

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