

Outcomes Star™ Psychometric Factsheet: Support Star (Parents)™

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Background

The Support Star (Parents) is a version of the Outcomes Star for parents of children facing serious illness. It was developed by Triangle with CLIC Sargent.

The collaborators contributed to the outcome areas and Journey of Change and provided feedback on the tool as part of an iterative process of development and refinement and piloted the draft version of this Star. More information about the development of the Support Star (Parents) can be found in the Development Report available on our website (<https://www.outcomesstar.org.uk/using-the-star/see-the-stars/support-stars/>).

Method and analytic strategy

Following initial analyses of the pilot version, Support Star (Parents) data routinely collected and entered onto the Star Online by a charity supporting Parents with serious illnesses was analysed by Triangle to confirm the Star's validity as an outcomes measurement tool. A full explanation of the analytic strategy is provided in the accompanying document – Outcomes Star Psychometric Factsheets: Overview.

In total, 1419 service users were included, of whom 110 had a 2nd reading. The majority of the children were recorded as being under 16 (90%), 80% were White, 17% were Asian and 4% were Black. There were approximately equal numbers of male and females (52% and 48%).

Results

Does it make sense for the different outcome areas of the Star to be included in the same tool?

Factor Structure: All inter-items correlations were above .30 supporting the inclusion of the outcome areas in the same tool, the Kaiser-Meyer-Olkin value exceeded the recommended minimum value of 0.60 (Kaiser 1970, 1974) and a significant Bartlett's Test of Sphericity (Bartlett, 1954) supported the suitability of the data for factor analysis. This analysis yielded a unidimensional factor structure explaining 68% of the variance in the data.

Internal Consistency: Internal consistency was good (Cronbach's $\alpha = .81$).

Is each outcome area measuring a unique aspect of the service user's situation?

Item redundancy: No inter-item correlation exceeded the 0.7 threshold, suggesting no redundancy between areas (see Table 1).

Does the Star detect change occurring within a service?

Responsiveness to change: Wilcoxon Signed Rank Test comparing 1st and 2nd Star readings revealed statistically significant increases and medium effect sizes for all outcome areas apart from 'Your child's education', which had a small-medium effect size (see Table 2).

Conclusion

The results of these initial analyses are encouraging and suggest that the Support Star (Parents) is a valid outcomes measurement tool, with a single underlying construct and responsiveness to positive changes, even those occurring over a relatively short time period and for service users whose health condition may be deteriorating.

Research is planned to examine consistency in understanding of the scales (inter-rater reliability) and the relationship between Star readings and other measures (convergent and predictive validity).

Further research

External research about the Star as an outcomes and keywork measure can be found on our website: <http://www.outcomesstar.org.uk/about-the-star/evidence-and-research/research-library/#all>

TABLE 1: Polychoric correlation matrix for outcome areas (N = 1419)

	2	3	4	5	6
1. Looking after your child	.59	.44	.35	.49	.55
2. Managing practicalities		.63	.33	.58	.57
3. Money			.32	.44	.45
4. Your child's education				.34	.31
5. Being a family					.58
6. Your emotional well-being					

TABLE 2: Responsiveness of the Support Star (Parents): 1st to 2nd reading (N = 110)

	First Star median	Final Star median	Z	Effect size <i>r</i> ²
7. Looking after your child	4	4	-4.96***	.33
8. Managing practicalities	4	4	-5.58***	.38
9. Money	4	4	-5.70***	.38
10. Your child's education	4	4	-3.75***	.25
11. Being a family	4	4	-5.04***	.34
12. Your emotional well-being	4	4	-4.70***	.32

****p* < .001

References

- Bartlett, M. S. (1954). A note on the multiplying factors for various χ^2 approximations. *Journal of the Royal Statistical Society. Series B (Methodological)*, 296-298.
- Burns, S. & MacKeith, J. (2012) *The Life Star User Guide and The Life Star: Organisation Guide*, Brighton: Triangle Consulting
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- Kaiser, H. F., & Rice, J. (1974). Little jiffy, mark IV. *Educational and psychological measurement*, 34(1), 111-117.
- MacKeith, J., (2014). Assessing the reliability of the Outcomes Star in research and practice. *Housing, Care and Support*, 17(4), 188-197.

¹ Cohen provided rules of thumb for interpreting these effect sizes, suggesting that an *r* of .1 represents a 'small' effect size, .3 represents a 'medium' effect size and .5 represents a 'large' effect size