

## Outcomes Star™ Psychometric Factsheet: Support Star (Young People)™

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### Background

The Support Star (Young People) is a version of the Outcomes Star for young people 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 (Young People) 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 (Young People) data routinely collected and entered onto the Star Online by a charity supporting young people 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, 981 service users were included, of whom 300 had a 2<sup>nd</sup> reading. The majority of service users were aged 16-24 (95%) White (84%) and there were equal numbers of male and females (51% and 49%).

### 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 66% of the variance in the data.

**Internal Consistency:** Internal consistency was good (Cronbach's  $\alpha = .80$ ).

#### ***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 1<sup>st</sup> and 2<sup>nd</sup> Star readings revealed a statistically significant increase and small-medium effect sizes for all outcome areas apart from Money, which had a medium effect size (see Table 2).

### Conclusion

The results of these initial analyses are encouraging and suggest that the Support Star (Young People) 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 keyword 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 = 981)**

	2	3	4	5	6	7
1. Physical health	.49	.55	.46	.46	.47	.57
2. Study and work		.49	.45	.37	.38	.43
3. Doing what matters to you			.45	.58	.47	.51
4. Money				.35	.38	.37
5. Friends and relationships					.62	.57
6. Home and family						.55
7. Emotional well-being						

**TABLE 2: Responsiveness of the Support Star (Young People): 1<sup>st</sup> to 2<sup>nd</sup> reading (N = 300)**

	First Star median	Final Star median	Z	Effect size <i>r</i> <sup>2</sup>
1. Physical health	3	4	-4.28***	.19
2. Study and work	3	3	-4.50***	.20
3. Doing what matters to you	3	4	-6.27***	.27
4. Money	3	4	-6.58***	.30
5. Friends and relationships	4	4	-3.21***	.17
6. Home and family	4	4	-4.99***	.27
7. Emotional well-being	3	4	-3.95***	.18

\*\*\**p* < .001

(N.B. service users with readings at the top of the Journey of Change, who could not move forward, were excluded. Change was compared for 1<sup>st</sup> to 2<sup>nd</sup> readings and is likely to have been greater if using subsequent readings)

## References

Bartlett, M. S. (1954). A note on the multiplying factors for various  $\chi^2$  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

<sup>1</sup> 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

Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika*, 35(4), 401-415

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.