

Outcomes Star™ Psychometric Factsheet: Community Star™

Dr Anna Good, Triangle Consulting

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Background

The Community Star is a version of the Outcomes Star for developed by Triangle with Groundwork UK and 17 Groundwork Trusts, who contributed to the outcome areas and Journey of Change, piloted the draft version of this Star and provided feedback on the tool. More information about the Community Star can be found at <https://www.outcomesstar.org.uk/using-the-star/see-the-stars/community-star/>.

Method and analytic strategy

Community Star data routinely collected and entered onto the Star Online by 44 organisations was analysed by Triangle to confirm the published Community 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, 1370 service users were included, of whom 683 had a review reading. Service users were aged 9-88 ($M = 44.6$), two thirds were white British/Irish (66%) and there were slightly more females than males (55% and 45% male).

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 was 0.83, exceeding 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 63.8% of the variance in the data.

Internal Consistency: Internal consistency was good (Cronbach's $\alpha = .82$).

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 a statistically significant increase for all outcome areas. Three outcome areas had medium effect sizes and the other three were very close and to the threshold for a medium effect size (see Table 2). This included some service users who began at the top of the Journey of Change so could not move forward so effect sizes would have been larger had these service users been excluded.

Conclusion

The results of these initial analyses are encouraging and suggest that the Community Star 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.

We are keen to examine consistency in understanding of the scales (inter-rater reliability) and the relationship between Star readings and other measures (convergent and predictive validity). Please contact us if you have Community Star data and would like to be involved in this research.

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 = 1370)

	2	3	4	5	6
1. Feeling safe	.54	.37	.48	.31	.36
2. Getting to know people		.58	.45	.40	.54
3. Making a difference			.46	.45	.64
4. Building a healthy lifestyle				.49	.45
5. Making greener choices					.50
6. Confidence and learning					

TABLE 2: Responsiveness of the Community Star: 1st to 2nd reading (N =683)

	First Star median	Final Star median	Z	Effect size <i>r</i> ²
Feeling safe	4.00	4.00	-10.82***	0.29
Getting to know people	4.00	4.00	-13.63***	0.37
Making a difference	3.00	3.00	-11.96***	0.32
Building a healthy lifestyle	3.00	4.00	-10.04***	0.27
Making greener choices	3.00	4.00	-10.77***	0.29
Confidence and learning	3.00	4.00	-11.37***	0.31

****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.
- 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.

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