

## Outcomes Star™ Psychometric Factsheet: Youth Star™

*Authors: Dr Anna Good; Emily Lamont; Triangle Consulting Social Enterprise Ltd*

### Background

The Youth Star is a version of the Outcomes Star for use in universal, community-based youth work. It was developed by Triangle in collaboration with Groundwork UK in response to new UK statutory guidance encouraging local authorities to focus efforts on vulnerable young people.

A number of Groundwork UK trusts contributed to the outcome areas and Journey of change, providing feedback on the tool as part of an iterative process of development and refinement and piloting the draft version of the Youth Star within their services over a 3-month period. More information about the development of Youth Star can be found in the organisation guide (Burns, MacKeith & Graham, 2012) and overall principles behind the development of all versions of the Outcomes Star are described in MacKeith (2011).

### Method and analytic strategy

Data on the acceptability and content validity of the pilot version was gathered using questionnaires completed by service users ( $n = 34$ ) and keyworkers ( $n = 18$ ) in services provided by the collaborators at the end of the three-month pilot period.

Anonymised Youth Star data routinely collected and entered onto the Star Online by a Young people's service provided by a UK County council was analysed by Triangle to test the Star's validity as an outcomes measurement tool. In total, 139 service users with at least one review Star reading were included. Service users were aged between 10 and 22 ( $M = 15.16$ ), the vast majority were White British (91%) and there were slightly more females (54%) than males. In terms of support needs, 15% of service users had learning difficulties, 12% had mental health issues and 6% were misusing drugs.

A full explanation of the analytic strategy is provided in the accompanying document – Outcomes Star Psychometric Factsheets: Overview

### Results

#### ***Do service users and workers view the Star as appropriate and useful?***

**Acceptability and Content validity:** More than two thirds of keyworkers felt that the draft version of the Youth Star helped them and the young person to have a useful discussion (72%) and to get an overall picture of young people's strengths and needs (67%).

Just over 70% of service users were happy with the length of time it took to complete the Youth Star, and 50% felt it helped them to see their strengths and understand what needed to change.

This feedback was used in developing the published version of the Youth Star.

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

**Factor Structure:** Several inter-items correlations were above .30, 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. A unidimensional factor structure was advised explaining 66% of the variance in the data.

**Internal Consistency** Internal consistency was just below what is considered acceptable (Cronbach's  $\alpha = .68$ ), and this would be marginally improved if the Choices and behaviour scale was removed ( $\alpha = .69$ ).

***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 revealed a statistically significant increase in all outcome areas (see Table 2). The effect sizes were medium for Making a difference, Wellbeing and Communicating, and small-medium for Hopes and dreams, Education and work and Choices and behaviour.

## Conclusion

The results of these initial analyses are encouraging and suggest that the Youth Star is a useful and that it is sensitive to change. The correlations between readings in each area were not particularly strong, particularly those between readings in the Choices and behaviour area (about taking risks with drugs, alcohol) and Wellbeing, Hopes and dreams and Communicating and internal consistency. Nevertheless, a unidimensional factor structure was advised within the Factor Analysis.

Further 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).

**TABLE 1: Correlation matrix for outcome areas**

	1	2	3	4	5
1 Making a difference					
2 Hopes & dreams	.25				
3 Well-being	.33	.50			
4 Education & work	.22	.29	.34		
5 Communicating	.35	.30	.31	.20	
6 Choices & behaviour	.29	.12	.18	.32	.10

**TABLE 2: Responsiveness of the Star**

	First Star median	Final Star median	Z	Effect size $r^2$
Making a difference	4.00	4.00	-5.56***	0.33
Hopes & dreams	4.00	4.00	-4.55***	0.27
Well-being	3.00	4.00	-5.29***	0.32
Education & work	4.00	4.00	-3.85***	0.23
Communicating	3.00	4.00	-6.63***	0.40
Choices & behaviour	4.00	4.00	-3.87***	0.23

\*\*\*p <.001

## 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 & Graham, K. (2012) The Youth Star: Summary guidance and The Youth Star: Organisation Guide, Brighton: Triangle Consulting
- 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.

<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