Outcomes Star™ Psychometric Factsheet: Family Star™

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Background

The Family Star was the first Star for families to be created by Triangle. It was developed by Triangle with Camden Council CSF and Camden service providers including Hopscotch, Coram, Elfrida Rathbone, Families In Focus, Agar Grove Children's Centre and the YOS, plus Family Action and additional piloting and feedback from Hampshire Family Services**.**

More information about the Family Star can be found in the Organisation Guide (Burns & MacKeith, 2017) and the overall principles behind the development of all versions of the Outcomes Star are described in MacKeith (2011).

Method and analytic strategy

Family Star data routinely collected and entered onto the Star Online was analysed by Triangle to test the Star's validity as an outcomes measurement tool. These psychometric tests were conducted using anonymised data (*N* =558) collected by a UK County Council. The average time between 1st and 2nd Star readings was 79 days. A full explanation of the analytic strategy is provided in the accompanying document – Outcomes Star Psychometric Factsheets: Overview.

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: The Wilcoxen Signed Rank Test revealed a statistically significant increase in all outcome areas (see Table 2), with medium effect sizes for seven areas and small-medium effects for two areas (Keeping your children safe, Home and money).

Results

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

Factor Structure: 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. The analysis yielded a unidimensional factor structure explaining 70% of the variance in the data.

Internal Consistency Internal consistency was very good (Cronbach's α =.89).

Conclusions

The results of these initial analyses are encouraging and suggest that the Family Star is a valid outcomes measurement tool, with a unidimensional factor structure, internal consistency, and responsiveness to change.

Additional research

Further research examining the psychometric properties of the Family Star Plus including inter-rater reliability and predictive validity has been conducted and is available upon request.

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* =558)

	1	2	3	4	5	6	7
1 Physical health							
2 Emotional well-being	.43						
3 Keeping your children safe	.48	.49					
4 Social networks	.44	.46	.44				
5 Education and learning	.48	.51	.52	.56			
6 Boundaries and behaviour	.38	.50	.40	.39	.52		
7 Family routine	.49	.47	.54	.38	.53	.56	
8 Home and money	.35	.34	.49	.35	.38	.30	.44

Table 2. Responsiveness of the Family Star (*N* =558)

	First Star median	Final Star median	*Z*	*Effect size r[1]*
Physical health	7.00	8.00	-10.89***	0.33
Emotional well-being	7.00	7.00	-9.92***	0.30
Keeping your children safe	8.00	8.00	-7.03***	0.21
Social networks	6.00	7.00	-10.63***	0.32
Education and learning	7.00	8.00	-11.28***	0.34
Boundaries and behaviour	6.00	7.00	-11.37***	0.34
Family routine	7.00	8.00	-9.91***	0.30
Home and money	7.00	8.00	-9.73***	0.29

***p <.001

[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

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.

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