Outcomes Star™ Psychometric Factsheet: Older Person's Star™

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Background

The Older Person's Star is focused on re-enablement and measures progress towards maximising independence and well-being.

It was developed by Triangle alongside with service providers and commissioners from Age UK and Camden, Westminster, Brent and Hammersmith and Fulham Borough Councils.

These 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. They also piloted the draft version of the Older Person's Star within their services, which included resource centres, an intermediate care service, a re-enablement team and a housing team.

More information about the development of the Older Person's Star can be found in the organisation guide (Burns, MacKeith & Baker, 2017) and the 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 62 individuals using services provided by the collaborators at the end of the pilot period.

Older Person's 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. A full explanation of the analytic strategy is provided in the accompanying document – Outcomes Star Psychometric Factsheets: Overview.

These analyses used anonymised data from 948 service users collected by three licenced and trained charities, two of which were housing associations and one providing more general support to older people. Over half of service users (57%) were older than 75 (M = 85.75, SD = 11.44), 54% were female and 90% were White British or Irish.

Results

> **Do service users and workers view the Star as appropriate and useful?**
>
> **Acceptability and Content validity:** 87% of older people said that the Older Person's Star described their current situation 'fairly well' or 'very well', and 81% enjoyed using the Star.

> **Does it make sense for the different outcome areas of the Star to be included in the same tool?**
>
> **Factor Structure:** The suitability of the data for factor analysis was confirmed, with inter-item correlations above .30, a Kaiser-Meyer-Olkin value exceeding the recommended minimum value of 0.60 (Kaiser 1970, 1974) and a significant Bartlett's Test of Sphericity (Bartlett, 1954). This analysis yielded a unidimensional factor structure explaining 94% of the variance in scores.
>
> **Internal Consistency:** Internal consistency was very good (Cronbach's α = 0.88).

> **Is each outcome area measuring a unique aspect of the service user's situation?**
>
> **Item redundancy:** The only inter-item correlation exceeding the 0.7 threshold was between Keeping in touch and Feeling positive (r = .76), suggesting possible item redundancy between these two areas (see Table 1).

> **Does the Star detect change occurring within a service?**
>
> **Responsiveness to change:** Wilcoxen Signed Rank Test revealed medium effect sizes and a statistically significant increase in all areas of the Older Person's Star (p <.001; see Table 2).

Conclusion

These initial psychometric analyses are encouraging and suggest that the Older Person's Star is a valid outcomes measurement tool, which measures a single underlying construct and is responsiveness to change.

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: Correlation matrix for outcome areas (N = 948)

	1	2	3	4	5	6
1 Staying as well as you can						
2 Keeping in touch	.64					
3 Feeling positive	.69	.76				
4 Being treated with dignity	.37	.30	.31			
5 Looking after yourself	.74	.59	.65	.36		
6 Feeling safe	.59	.57	.59	.38	.64	
7 Managing money & personal admin	.50	.46	.47	.28	.48	.55

TABLE 2: Responsiveness of the Star (N = 658)

	First Star median	Final Star median	Z	Effect size r[1]
Staying as well as you can	7	8	-15.50*	0.43
Keeping in touch	7	8	-11.75*	0.32
Feeling Positive	7	8	-11.63*	0.32
Being treated with dignity	9	10	-9.28*	0.26
Looking after yourself	7	9	-11.74*	0.32
Feeling safe	8	9	-12.27*	0.34
Managing money & personal admin	8	9	-11.69*	0.32

*$p < .001$

[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

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