

Outcomes Star™ Psychometric Factsheet: Victim of Crime Star™

Dr Anna Good, Triangle Consulting

September 2023

Background

The Victim of Crime Star is the version of the Outcomes Star designed for people who have been victims of any type of crime and need support with dealing with the emotional and practical repercussions of crime as they navigate through the criminal justice or legal systems. The Victim of Crime Star was developed during 2019 by Triangle Consulting Social Enterprise in collaboration with Thames Valley Partnership and the Thames Valley Office of Police and Crime Commissioner. The process involved workers, managers, associated professionals and victims of crime from Victims First and the Willow Project in Thames Valley. Staffordshire Victims Gateway and Axis Counselling also contributed.

More information about the Victim of Crime Star can be found on the Triangle website and in the Development Report: <https://www.outcomesstar.org.uk/wp-content/uploads/Victim-of-Crime-Star-Development-Report-final-2pdf.com-edit-metadata.pdf>

Method and analytic strategy

Routinely collected Victim of Crime Star data entered onto the Star Online was analysed by Triangle to confirm the validity of the Victim of Crime Star as an outcomes measurement tool. In total, 2166 service users were included, 1734 of whom had a review reading. Second and third Star readings were used as the 'review reading' as this provided a sufficiently large data set.

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

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. This analysis yielded a unidimensional factor structure explaining 59.7% of the real-data variance.

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: None of the inter-item correlations exceeded the 0.7 threshold, suggesting little redundancy between areas (see Table 1).

Does the Star detect change occurring within a service?

Responsiveness to change: Wilcoxon Signed Rank Test comparing first and review Star readings revealed statistically significant change for all outcome areas. After excluding those who could not move forward (who began at 5 on the individual outcome areas), between 68% and 77% of service users progressed in each area and the effect size was large for six areas and medium to large for the remaining two areas ($p < .001$, see Table 2). The results when including service users who could not move forward (because they began at 5 on the individual outcome areas) are shown in Table 3.

Conclusion

The results of these initial analyses are encouraging and suggest that the Victim of Crime Star is a valid outcomes measurement tool, with a single underlying construct and responsiveness to change.

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 Victim of Crime Star data and would like to be involved in this research.

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 = 557)

	1	2	3	4	5	6	7
1. Safety at home	-						
2. Your responsibilities	.33	-					
3. Out and about	.44	.48	-				
4. Physical health and well-being	.31	.49	.53	-			
5. Emotional well-being	.41	.50	.53	.53	-		
6. Support network and relationships	.35	.41	.38	.36	.44	-	
7. Thinking and beliefs	.36	.41	.48	.45	.62	.37	-
8. Navigating the legal process	.23	.30	.31	.31	.38	.30	.45

TABLE 2: Responsiveness of the Victim of Crime Star (excluding service users starting at 5 who could not move forward)

Scale	Time 1	Time 2	Wilcoxon	Effect	%	n
	Median	Median	statistic	size ¹	readings	
			Z	r	improved	
1. Safety at home	3.00	4.00	-27.296***	0.54	77%	1289
2. Your responsibilities	3.00	4.00	-27.425***	0.45	69%	1450
3. Out and about	2.00	4.00	-28.405***	0.52	72%	1479
4. Physical health and well-being	3.00	4.00	-26.595***	0.50	68%	1388
5. Emotional well-being	2.00	4.00	-31.228***	0.54	77%	1689
6. Support network and relationships	3.00	4.00	-23.392***	0.49	64%	1151
7. Thinking and beliefs	2.00	4.00	-29.529***	0.51	69%	1666
8. Navigating the legal process	2.00	4.00	-31.034***	0.54	77%	1670

*** $p < .001$

¹ Cohen (1988) 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

TABLE 3: Responsiveness of the Victim of Crime (including service users starting at 5 who could not move forward)

Scale	Time 1	Time 2	Wilcoxon	Effect	%
	Median	Median	statistic	size ¹	readings
			Z	r	improved
1. Safety at home	3.00	4.00	-26.865***	0.46	57%
2. Your responsibilities	3.00	4.00	-26.981***	0.46	58%
3. Out and about	3.00	4.00	-27.965***	0.47	61%
4. Physical health and well-being	3.00	4.00	-25.838***	0.44	54%
5. Emotional well-being	2.00	4.00	-31.132***	0.53	75%
6. Support network and relationships	4.00	4.00	-22.253	0.38	42%
7. Thinking and beliefs	2.00	4.00	-29.140***	0.49	67%
8. Navigating the legal process	2.00	4.00	-30.813***	0.52	74%

*** $p < .001$

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.

Cohen, J. 1988. *Statistical power analysis for the behavioral sciences*, Hillsdale, NJ: Lawrence Erlbaum.

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.