

Computing a Fidelity Index on a Program with Multiple Components

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What is a fidelity index?

A quantitative assessment of the extent to which a multi-component intervention has been implemented as intended across the program.

What are the key criteria to include when assessing implementation? (Durlak & DuPre, 2008)

Level	Criteria	Definition
Individual	<i>Adherence</i>	Does the component as delivered align with the component as planned?
	<i>Dosage</i>	Was the component delivered with the expected frequency, intensity, and duration?
	<i>Quality</i>	How well was the component delivered?
	<i>Responsiveness</i>	To what extent are the participants engaged?
Program	<i>Reach</i>	To what extent has the target group participated (aka coverage)?
	<i>Differentiation</i>	To what extent is the program component unique?
	<i>Contrast</i>	What are participants in the control/comparison groups receiving?
	<i>Adaptation</i>	What changes or modifications have been made to the original program component?

What are the steps for computing a fidelity index for a program with multiple components?

1. Identify key components.
2. Determine your criteria.
3. Define your criteria.
4. Determine levels and thresholds.
5. Assign scores and compute the range.
6. Define implementation at the individual level.
7. Define implementation at the component level.
8. Repeat steps 2-7 for each of your identified key components.
9. Define implementation at the program level.
10. Score each component at the predetermined time.
11. Roll-up across components and entire program to calculate fidelity.

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Example Calculation of a Fidelity Index

Individual Level Fidelity			
Adherence	Dosage	Quality	Responsiveness
Poor = 1 Adequate = 2 Exemplary = 3	Poor = 1 Adequate = 2 Exemplary = 3	Poor = 1 Adequate = 2 Exemplary = 3	Poor = 1 Adequate = 2 Exemplary = 3
Total = (1+2+2+3) = 8			

Component Level Fidelity								
<i>Poor = 1</i>			<i>Adequate = 2</i>			<i>Exemplary = 3</i>		
50% or fewer score between 10-12			51-74% score between 10-12			75% or more score between 10-12		
Component 1			Component 2			Component 3		
		<i>Score</i>			<i>Score</i>			<i>Score</i>
10-12	65%	2/3	10-12	78%	3/3	10-12	30	1/3
Total = (2+3+1) = 6								

Program Level Fidelity		
<i>Poor</i>	<i>Adequate</i>	<i>Exemplary</i>
Combined score of 1-4	Combined score of 5-7	Combined score of 8-9
44% or less	55 – 77%	78% or higher
Total = 6/9 = 66% = Adequate Fidelity of Implementation		

References

Durlak, J. A. & DuPre, E. P. (2008). Implementation matters: A review of the research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology*, 41, 327-350.

Mobray, C.T., Holter, M. C., Teague, G. B., & Bybee, D. (2003). *American Journal of Evaluation*, 24(3), 315-340.

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