Theory, Model, and Framework Comparison and Selection Tool (T-CaST) for Implementation Researchers

****See* *final page* *for additional information, including the* *purpose of the tool*, *how the tool was developed*, *and* *where you can find theories/models/frameworks* *to use with this tool.***

Instructions:

1. Complete Table 1 with information about your implementation project
2. Complete Table 2 to evaluate the fit of one or more theory/model/framework (TMF) to your project. The tool can be used to evaluate, assess gaps, and/or identify opportunities to combine TMFs.
   - Step 1: In column 1, select the characteristics that are relevant to your project.
   - Step 2: Note potential TMF(s) at the top of the third and/or fifth columns
   - Step 3: For each selected characteristic, rate the fit of the potential TMF to your project, and include notes that explain your score.
     - 0 = Poor fit (TMF does not fit project along this characteristic)
     - 1 = Moderate fit (TMF somewhat fits project along this characteristic)
     - 2 = Good fit (TMF fits project well along this characteristic)
   - Step 4 (Optional): Calculate average score in final row, and use to assess fit of theory to particular project. If multiple team members are completing the tool, consider averaging scores across team members.
   - Step 5: Repeat as needed with alternative TMFs.
   - Step 6: In the action section, describe how you will apply the information from the completed tool to your project.

Table 1: Project information

Project Title:	
Research Questions:	**Aims:**
Study Design:	**Constructs:**

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Data Collection:	Analysis Plan:

Table 2: Theory Evaluation

Select to Include	Theory / Model / Framework (TMF) Characteristic	TMF 1:		TMF 2:	
		Score (0,1,2)	Notes	Score (0,1,2)	Notes
	1. Usability				
	a. TMF includes relevant constructs (e.g., self-efficacy; climate)				
	b. Key stakeholders (e.g., researchers; clinicians; funders) are able to understand, apply, and operationalize TMF.				
	c. TMF has a clear and useful figure depicting included constructs and relationships among them.				
	d. TMF provides a step-by-step approach for applying it.				
	e. TMF provides methods for promoting implementation in practice.				
	f. TMF provides an explanation of how included constructs influence implementation and/or each other.				
	2. Testability				
	a. TMF proposes testable hypotheses.				
	b. TMF includes meaningful, face-valid explanations of proposed relationships.				
	c. TMF contributes to an evidence base and/or theory development because it has been used in empirical studies.				
	3. Applicability				
	a. TMF focuses on a relevant implementation outcome (e.g., fidelity; acceptability).				

Select to Include	Theory / Model / Framework (TMF) Characteristic	TMF 1: Score (0,1,2)	TMF 1: Notes	TMF 2: Score (0,1,2)	TMF 2: Notes
	b. A particular method (e.g., interviews; surveys; focus groups; chart review) can be used with TMF.				
	c. TMF addresses a relevant analytic level (e.g., individual; organizational; community).				
	d. TMF has been used in a relevant population (e.g., children; adults with serious mental illness) and/or conditions (e.g., attention deficit hyperactivity disorder; cancer).				
	e. TMF is generalizable to other disciplines (e.g., education; health services; social work), settings (e.g., schools; hospitals; community-based organizations), and/or populations (e.g., children; adults with serious mental illness).				
4. Acceptability					
	a. TMF is familiar to key stakeholders (e.g., researchers; scholars; clinicians; funders).				
	b. TMF comes from a particular discipline (e.g., education; health services; social work).				
Scoring (Optional)	Total Score:				
	Number of Characteristics:				
	Average Score (Total Score / Number of Characteristics):				
	Average Score Among Team:				
Action	**How will you apply the information from this tool?** *(e.g., Which TMF(s) did you select? What is your rationale for selecting the TMF(s)? If applicable, how will you combine multiple TMFs?)*				

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<u>**Additional Information**</u>

What is the purpose of this tool?

Implementation researchers can use this tool to assess the utilization of one or more theory, model, or framework (TMF) in a particular project. More specifically, the tool can be used for:

- Considering the characteristics of TMFs most important for the project
- Presenting characteristics to stakeholders to identify their priorities
- Evaluating the ways in which one or more TMF meets the needs of the project
- Comparing potential TMFs to select the best fit for the project
- Identifying ways in which multiple TMFs can complement one another to address all important criteria
- Communicating to various stakeholders reasons why a TMF was selected
- Increasing transparency related to TMF selection and use in reporting (manuscripts, grants, etc.)

How was this tool developed?

This tool was developed by the Dissemination and Implementation Methods Unit at the North Carolina Translational and Clinical Sciences Institute (NC TraCS) at the University of North Carolina at Chapel Hill under the leadership of Principal Investigator Sarah A. Birken. You can read more about the process for criteria selection and tool development at https://rdcu.be/bbTLQ.

Where can I find TMFs to use with this tool?

An inventory of D&I TMFs can be found at http://www.dissemination-implementation.org.

Please note that this resource is likely not inclusive of all TMFs that can be used in implementation research and practice. For example, Strifler et al. (2018) identified 159 TMFs used in implementation studies.