



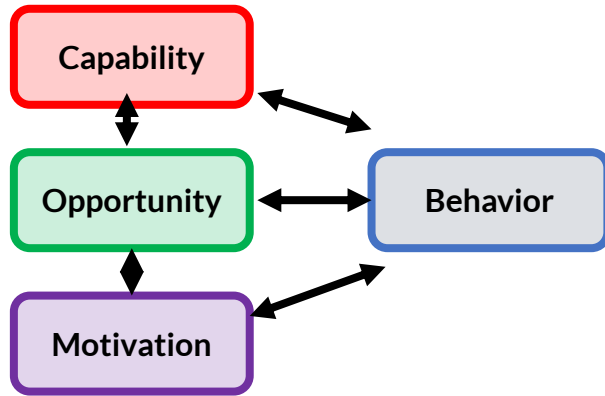
Research + Psychology = Magic

How to Plan and Analyze Research with the COM-B Model of Behavior Change

Amy Bucher, Ph.D.
Behavior Change Design Director
abucher@madpow.net | @amybphd
UXPA Boston, May 10, 2018

The COM-B Model of Behavior Change

Behaviors happen when people have the *capability*, *opportunity*, and *motivation* to perform them.



Tips for The Interview Process:

- If possible, have a partner take notes while you interview
- Annotate your notes as you go with COM-B themes
- If you're audio-recording, add time stamps for verbatims to capture
- Respondents may not be willing to own up to socially undesirable behaviors:
 - Be non-judgmental
 - Try "sideways strategies"
 - Ask about "other people" who have done the behavior
 - Provide normalization and context, if appropriate
 - Reassure respondents about the confidentiality of their data, if this is the case
- Use your observations to confirm, rebut, or embellish what you hear from respondents

Using COM-B in Analysis:

- Create a grid for your findings along the COM-B dimensions (see sample image →)
- Include space for quotes or other primary evidence from research
- The grid can be used during research for note-taking, or after for organizing and presenting findings
- Remove any COM-B dimensions not applicable to your findings
- If research will lead to solution development, record recommendations or interpretations alongside the findings
- Behavior change research offers toolkits to bring COM-B findings into solution design; these can be integrated into analysis, or approached later

COM-B FACTOR	TOP SUB-DOMAIN	PARTICIPANT QUOTE	INSIGHT/CHANGE NEEDED	INTERVENTION FUNCTION	RELATIVE WEIGHT/PRIORITY
PHYSICAL CAPABILITY	Physical Skills (strength, dexterity, stamina)				
	Knowledge (including knowledge of condition / scientific rationale); procedural knowledge; knowledge of task environment; awareness				
	Memory; attention; attention control; decision making; cognitive overload / tiredness; Mindfulness; Willpower				
REFLECTIVE MOTIVATION	Mental Skills; skills development; competence; ability; interpersonal skills; practice; self assessment				
	Self-Regulation; self-monitoring; breaking habits; action planning				
	Beliefs About Capabilities; Self-Confidence; Perceived Competence; Self-Efficacy; Perceived Behavioral Control; RLOC; Beliefs; Self-Esteem; Empowerment; Professional Confidence; Beliefs about				
AUTOMATIC MOTIVATION	Consequences; Outcome Expectancies; Characteristics of Outcome Expectancies; Anticipated Regret; Consequences				
	Intentions; Stability of Intentions; Stages of Change Model; Translational Model and Stages of Change; Implementation Intentions				
	Goals (Distal / Proximal); Goal Priority; Goal / Target Setting; Goals (Autonomous / Controlled); Action Planning; Implementation Intentions				
SOCIAL OPPORTUNITY	Identity; Professional Role; Personal Boundaries; Professional Confidence; Group Identity; Leadership; Organizational Commitment				
	Options; Resources; Hope; Faith; Unrealistic Optimism				
	Rewards (Proximal / distal); Valued / not valued; Probable / improbable; Incentives; Punishment; Reinforcement; Contingencies; Sanctions; Beliefs				
PHYSICAL OPPORTUNITY	Environment; Resources; Resources / mental resources; organizational culture / climate; salient events / critical incidents; person x environment interaction; barriers and facilitators				

Learn more about COM-B:

Michie, S., van Stralen, M. & West, R. (2011) The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(42).

Michie, S. & Johnston, M. (2012). Theories and techniques of behaviour change: Developing a cumulative science of behaviour change. *Health Psychology Review*, 6, 1-6.

Michie, S., Richardson, M., et al. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine*, 46(1), 81-95.



Building Your Research Protocol:

Researchers can use the COM-B model to build interview protocols that dig into why a behavior does or does not happen. These sample questions can serve as a guide.

COM-B Element	Questions to Ask	Evidence to Look For
Physical capability: Skills	Has this person received adequate training to perform the tasks? Does this person have the physical skills, strength, and stamina to complete the task?	<ul style="list-style-type: none"> • Successful task completion • Asking for assistance • Needing tools or assistive devices • Ability to complete task at one time vs. break into steps
Psychological capability: Knowledge	Does this person demonstrate knowledge of what needs to happen for the task?	<ul style="list-style-type: none"> • Ability to explain how to complete the task, step-by-step
Psychological capability: Memory & attention	How does the person cope when there are distractions?	<ul style="list-style-type: none"> • Performance in busy or distracting circumstances
Psychological capability: Mental skills	Can the person understand everything that needs to happen? Can he interact with other people to make the task happen?	<ul style="list-style-type: none"> • How the person interacts with others while working on the task • If the person appears confused or unsure
Psychological capability: Self-regulation	How does the person monitor the situation and adapt their behaviors accordingly?	<ul style="list-style-type: none"> • How the person adjusts to unexpected circumstances • Whether the person can change plans if needed
Social opportunity: Social norms & support	What do most people usually do? What do people say if someone does something different?	<ul style="list-style-type: none"> • What others are doing • Reactions from others to behaviors
Social opportunity: Intergroup conflict	Are there other teams or groups making it easier or harder to do the behavior?	<ul style="list-style-type: none"> • What others are doing • Reactions from others to behaviors • Avoidance of others
Social opportunity: Modeling	Who else, especially in senior or more experienced roles, is also doing this behavior? Or not doing it?	<ul style="list-style-type: none"> • What the managers or most experienced people are doing • The cues others are taking from them

COM-B Element	Questions to Ask	Evidence to Look For
Physical opportunity: Environmental resources, barriers, and facilitators	What tools, resources, or spaces are available (or not) for performing the behavior? Are they sufficient?	<ul style="list-style-type: none"> • Whether people have the stuff they need to do the behavior • If not, how they manage that
Physical opportunity: Organizational climate/culture	How do other people on your team react to the behavior? What do you see other people doing?	<ul style="list-style-type: none"> • What people say or do when the behavior happens or not • What artifacts speak to the behavior
Reflective motivation: Beliefs about capabilities & empowerment	Who do you need to ask in order to do this behavior? What stops you from doing this behavior?	<ul style="list-style-type: none"> • Confidence in talking about the behavior • Barriers mentioned
Reflective motivation: Goals and priorities	What is your top priority in this situation? What do you need to do to feel successful?	<ul style="list-style-type: none"> • Priorities in times of trade-off • What people say will make them successful
Reflective motivation: Identity & professional role	What does your role as [name] mean for how you do this behavior? What standards does your role have for the behavior?	<ul style="list-style-type: none"> • How people invoke their trade/role/identity to explain behavior • What others in the role do
Automatic motivation: Rewards, punishments, and incentives	Are there any externally imposed positive or negative consequences to how you perform the behavior?	<ul style="list-style-type: none"> • Programs that incentivize or punish behaviors • Details of rewards or incentives
Automatic motivation: Fear, stress, and mood	Does this behavior evoke an emotional response? Does your emotional state affect how the behavior is done?	<ul style="list-style-type: none"> • What programs exist to incentivize or punish behaviors? • How do they work?

Amy Bucher, Ph.D.
Behavior Change Design Director
abucher@madpow.net | @amybphd