Behavioural science can improve parenting interventions

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Parenting interventions can help give children a good start in life. By using methods from behavioural science, we can better understand how these interventions work. This can help us to make them more effective, scalable and sustainable.

Parenting interventions aim to change parenting behaviours by encouraging and supporting caregivers to engage in play and communication activities with their children and be responsive to child cues to nurture and improve child development. We know from randomised controlled trials (RCTs) that they can be effective. For example, the Msingi Bora parenting intervention in Kenya involved educational sessions encouraging caregivers to engage in five key practices: responsive play, responsive communication, hygiene, nutrition, and love and respect in the family[1]. The intervention improved maternal stimulating practices and child cognitive, language, and socioemotional outcomes[1].

Governments across the world recognise the importance of giving every child a good start in life, and many have adopted the WHO, UNICEF, and World Bank's Nurturing Care Framework (which is aligned with Sustainable Development Goal targets 3.2, 4.1, and 4.2). Recent years have seen significant efforts to develop, implement, and evaluate parenting interventions targeting different components of this framework, such as opportunities for early learning[2].

However, in a recent review including 125 RCTs, we identified significant gaps in our understanding of what core elements work, the mechanisms that elicit behaviour change, and how they can be implemented[3]. Failure to address these gaps has hindered efforts to adapt, scale-up, and sustainably integrate programs into existing health, education, and social service systems[2]. This means that parenting interventions are not reaching their full potential, and children are being left behind.

We believe that behavioural science can help. By leveraging behavioural science, researchers, implementing organisations, and governments can co-develop evidence-informed, sustainable, and scalable, parenting interventions.

Here we use the term 'behavioural science' to mean an intersectoral approach to the study of normal human behaviour and decision-making, with the aim of increasing the adoption of positive behaviours (*definition adapted from WHO and Impact Canada*). Though it is the science of understanding how to effectively change human behaviour, parenting intervention researchers have seemingly ignored its valuable lessons to date. Here are three key behavioural science lessons that can help resolve existing issues in parenting intervention research.

Firstly, to identify active ingredients of parenting interventions, researchers need to engage in a more intentional and transparent development process. The development of an intervention should begin by first determining the approach that will be adopted, formally analysing the target behaviour, and identifying theoretically predicted mechanisms of action. Context-specific formative research should then be conducted prior to testing the intervention's efficacy. Tools such as the Behaviour Change Interventions Ontology[4] and Behaviour Change Techniques Ontology (BCTO)[5] were developed to facilitate the design of behaviour change interventions by elucidating the mechanisms that need to be modified to bring about behaviour change, and the intervention functions required to change those mechanisms. For example, the BCTO catalogues 281 behaviour change techniques – that is, "the smallest parts of the content of a behaviour change intervention that are observable, replicable and on their own have the potential to bring about behaviour change"[5] (page 3) – that researchers can use to code interventions as an initial step to identifying what works and how in parenting interventions. This process can also help identify components that can be empirically tested as potential mechanisms through which parenting interventions improve children's development.

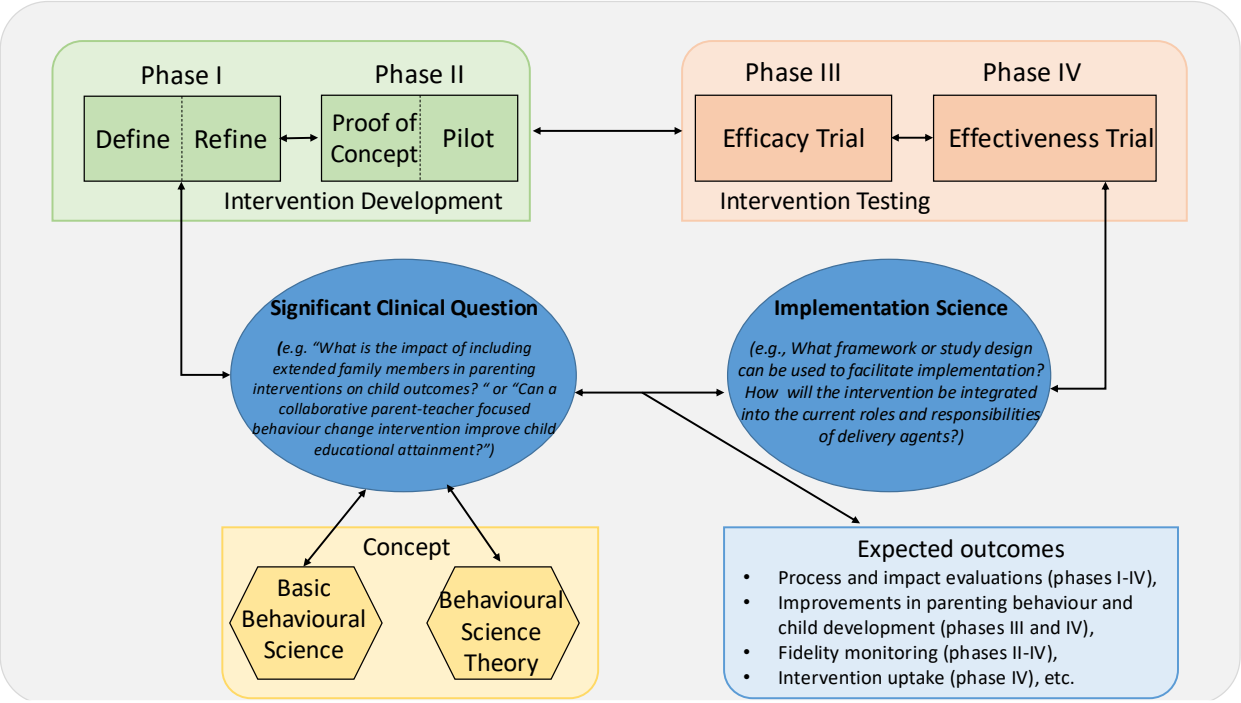
Secondly, behavioural scientists have created iterative frameworks for developing and testing interventions that evaluate elements like feasibility and efficacy before attempting to scale-up[6] (Fig. 1). Policymakers and non-governmental organisations implementing parenting interventions, and researchers testing their efficacy, should use this framework to minimise the number of programs that are implemented at scale with little evidence of their efficacy in improving child and parent outcomes.

Finally, researchers need to systematically report the content of parenting interventions and how they are implemented by following established reporting guidelines. We recommend the TIDieR (template for intervention description and replication) guidelines, which ensure that interventions are described in sufficient detail to allow their replication[7]. These can be used together with the consolidated advice on reporting early child development implementation research (C.A.R.E) guidelines[8], which were specifically developed to improve reporting on implementation processes in parenting interventions.

If those of us passionate about improving the early child environment truly want to give all children a good start in life, we must make a concerted effort to leverage existing tools to create, test, and implement methodologically-sound parenting interventions. This includes using

structured processes to develop parenting interventions, identifying their active ingredients, empirically examining the mechanisms through which they work, and systematically reporting how they are implemented. All these components are needed to inform the scale-up and sustainable implementation of parenting interventions to realise our global commitment to ensure that all girls and boys have access to quality early childhood development.

Figure caption: Adapted Behavioural Intervention Development and Testing Framework*



Framework based on ORBIT (Obesity-Related Behavioural Intervention Trials) and Medical Research Council complex intervention guidelines and developed within integrated Knowledge Transfer/Patient-Oriented Research frameworks. Intervention development elements are in green with testing elements in orange. Circles represent core elements that should drive the process. Bidirectional arrows indicate that as researchers move through the phases they can go forward or backwards depending on study needs.

*Figure adapted, with permission, from Figure 1 in Bacon et al., 2020 *Journal of the American College of Cardiology, 75*:2619-2622

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