

Using implementation theory to explain variation in delivery of a complex social intervention: process evaluation of the Strengthening Families Programme (10-14UK) in Wales UK

Jeremy Segrott, Heather Rothwell, Jonathan Scourfield, David Foxcroft, Jo Holliday, Kerry Hood, Ceri Phillips, Zoe Roberts, Sarah Morgan-Trimmer, Hayley Reed, David Gillespie, Claire Hurlow, Laurence Moore, Simon Murphy

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Development and Evaluation of Complex
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Introduction

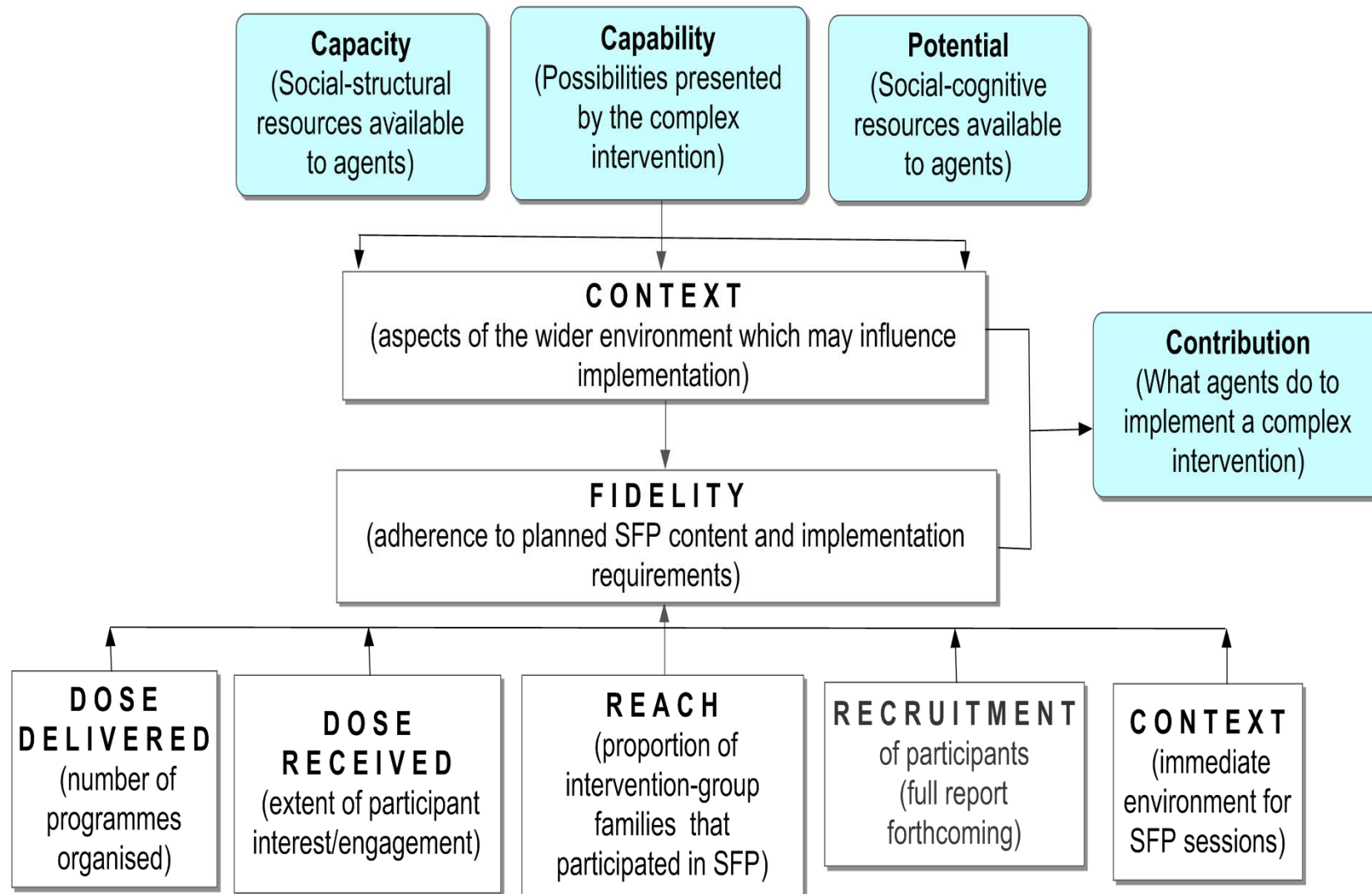
- Assessment of implementation fidelity is a key function of process evaluations (Moore, et al. undated; Carroll, et al. 2007)
- Focus on quantitative assessment of pre-specified structural aspects of interventions (e.g. adherence) has been criticised for paying insufficient attention to processes through which they occur (Hawe, et al. 2004; Bisset, et al. 2009)
- Significant variation in in implementation common (e.g. Cantu,et al. 2010; Durlak and DuPre, 2008; Lendrum and Humphrey, 2012)
- Increasing attention therefore being paid to:
 - interaction between intervention and contexts (Moore, et al. undated)
 - practitioners' agency (May, 2014, Bisset, et al. 2009)

Research Aims

- Process evaluation embedded within a randomised controlled trial of the Strengthening Families Programme 10-14, Wales, UK
- Assessed
 - adherence to content & implementation requirements
 - dose delivered (number of programmes organised);
 - dose received (extent of participant engagement);
 - reach (proportion of families that participated in SFP);
 - recruitment of participants
- Applied May's General Theory of Implementation to explore how implementation processes shaped the above indicators
- Findings used to help interpret main trial results

May's General Theory of Implementation

- Conceptualises implementation processes by understanding intervention-context interactions & practitioner agency (May, 2014)
- Explains how complex interventions are 'initiated', 'incorporated' and 'routinized' in particular contexts
- Integrates sociological concepts from implementation theories and psychological theories of individual behaviour



May's General Theory of Implementation

- **Potential**: Commitment to behave in line with an intervention's aims which is necessary to embed it within agents' working practice
 - Whether practitioners value the changes which an intervention will bring about and think they are feasible
- **Capability**: how practitioners:
 - adjust what they do when they organise an intervention: e.g. (re)allocation of roles – its workability
 - perceive intervention implementation to be integrated within the wider social system, including whether its values are shared
- **Capacity**: the structure into which an intervention is introduced
 - agents' co-operation to accommodate the intervention by modifying norms and roles
 - and redistributing material and cognitive resources

Methods: SFP10-14UK in Wales

- 7 week universal prevention intervention for groups of families
- Separate groups of parents and children during first hour each week
- Parents and children come together in family groups
- Families came forward in response to awareness-raising in the community or were referred by practitioners in local services
- Local agency partnerships appointed a programme coordinator
- Staff from local agencies trained as SFP facilitators and committed to facilitate SFP during all seven weeks of at least one programme
- 3½-day training courses in all research areas
- Programmes were delivered in schools and other community facilities with a target capacity of 10-12 families per programme

Trial Design

- Pragmatic RCT with families as the unit of randomisation
- Target sample size of 756 families,
- Recruitment undertaken by local delivery teams
- Families randomised on a 1:1 ratio to normal care + SFP10-14UK (intervention arm) or normal care (control group)

Process evaluation methods: Data Collection

- Mixed methods design
- Fidelity assessment: facilitator-completed score sheets for each programme hour (50 out of 56 programmes)
- 47 (12% of 392) sessions were also observed by researchers to estimate the reliability of facilitator reports of coverage of activities
- Routine data from each programme on delivery dates, venues, and staff; attendance, and uptake of child care and transport by families
- Semi-structured interviews with SFP staff to explore implementation processes and contextual factors

Methods: Data Analysis

- Descriptive statistics were calculated for variables representing SFP content coverage and other aspects of fidelity
- Agreement between observers assessed using ICCs
- Agreement between observers and researchers assessed by calculating percentage of agreement
- Thematic content analysis of qualitative data identified themes which were developed into an analytic framework.
- Coding framework refined through double-coding of 7 interviews
- Integration of qualitative and quantitative data

Findings I: What was delivered? (*Contribution*)

- 715 families recruited to the trial (361 to intervention arm)
- 47/56 programmes achieved target group size (5-12 families)
- However 60% of sessions ran with less than 5 families
- 287/361 (80%) of families attended at least one session
- 218/361 (60%) received intervention (attended 5 or more sessions)
- 119/361 (33%) attended all 7 sessions
- Facilitators rated participant engagement high in 94% of activities
- No evidence that small groups affected engagement

Findings I: What was delivered? (*Contribution*)

- 22/56 (39%) of groups achieved the target group composition
- Most of the remaining programmes still achieved a mix of families
- Good adherence to staffing levels (3 or more staff) and consistency
- Facilitators rated 96% of activities as mostly/fully covered
- This varied across trial sites from 90-99%
- Observers rated 77% of observed activities as mostly or fully covered (range 63-88%) : ICC scores from 2 observers = 0.73 (95% CI=0.65-0.79)
- Facilitators and observers' scores agreed 83% of the time (area range 73-93%)

Findings II: Project SFP Cymru set up

- *Potential* (commitment) was positive for the intervention
- SFP was welcomed as filling a gap – served 10-14 year olds, and brought parents and their children together
- Practitioners thought SFP benefited families by improving relationships and building skills
- They saw that SFP would help them in their professional roles
- Positive *potential* energised local partnerships to incorporate SFP into everyday practice by rearranging roles, responsibilities and resources necessary (good *capability*)
- 19 interviewees reported enjoying the training and 8 indicated they valued the manual because it was detailed and easy to follow
- Training increased *capability* because trainees could gain a good understanding of programme theory and design

Findings III: SFP implementation

- Difficulties in assembling facilitators for preparation meetings
- Link between coverage rates and: extent to which preparation meetings were held as intended
- Part of a wider problem affecting facilitator recruitment and retention
- *Capacity* to release staff for SFP decreased following funding cuts
- Qualitative data suggested that fidelity to staffing standards would be low, but quantitative data indicated the opposite
- Increasing reliance on staff from coordinators' own agency in three areas made requirements workable
- Multi-agency staffing was maintained in two areas where coordinators were in post throughout the trial

Findings III: SFP implementation

- For some aspects of implementation fidelity, co-ordinators' time in post was less important than their individual commitment (*potential*)
- The Robertshire co-ordinator lacked commitment to strict fidelity and consistency of staffing
- This negative *potential* may explain why preparation meetings were rarely held in this area
- Multi-agency staffing may have been more easily achieved in Robertshire if managers were not being asked to release staff for 7 consecutive SFP sessions and meetings
- Some facilitators in Robertshire contacted each other independently to prepare for upcoming sessions

Findings IV: Recruitment and retention

- All co-ordinators reported difficulties in recruiting families to the trial
 - Recruiting from the general population differed from recruiting from a defined client group which was the norm
 - Co-ordinators' contacts were with other agencies primarily concerned with supporting vulnerable and needy groups
 - They were recruiting to a trial and only half of the families recruited were allocated to receive SFP
- Some professionals were reluctant to refer families because those allocated to the control group would not receive SFP
- Value attached to SFP was partly blocked by the research context and, reduced integration of the intervention within local systems

Discussion

- SFP was delivered with good fidelity
- High levels of adherence to programme content but some variation
- Mirrors the findings of previous USA evaluations (e.g. Cantu, et al. 2010)
- High levels of *potential* towards SFP among practitioners appeared to have a positive influence on fidelity
- Facilitator training helped develop facilitators' *capability* to deliver the intervention as intended
- Organisation and quality of facilitators' preparatory meetings appeared to influence adherence, linked to coordinator commitment (*potential*), and *capacity* to coordinate staff across multiple agencies
- Recruitment a key challenge, with concerns about randomisation and universal provision reducing potential among some referrers

Discussion

- Targets on group composition (families with and without challenge) and group size not always achieved
- But most groups comprised a mix of families with /without challenges
- High levels of adherence and engagement suggest that variations in group composition / size did not impact significantly on delivery / group dynamics
- Capacity to provide staff from multi-agency networks reduced during the trial
- But coordinators were able to draw on resources within their own organisation (highlighted by mixed methods approach)

Conclusion

- General Theory of Implementation helped us identify:
 - how implementation processes shaped what was delivered, how/why it varied, and key challenges
 - the kinds of conditions needed for successful delivery when interventions are transferred to new settings
- Highlights how the delivery of an intervention is shaped by
 - its interaction with complex delivery systems,
 - the agency of practitioners
- Important to understand implementation processes (not just pre-specified aspects of the intervention such as fidelity)
- Value of a mixed methods approach to answer these questions

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Email: segrottj@cardiff.ac.uk

Twitter: @DrJeremySegrott
@DECIPHerCentre



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