

## Supplementary file 2: Realist Review Protocol

**Title:** Circumstances that promote social connectedness in older adults participating in intergenerational programs with adolescents: a realist review

### Introduction

Intergenerational programs are programs that involve two unrelated generational groups and result in a mutually beneficial outcome for the participants. Erikson's theory of psychosocial development highlights that adolescents (for the purpose of this review aged 13-19) and older adults (for the purpose of this review 65 and older) are at comparable stages, facing questions around identity and integrity and dealing with life transitions of puberty and retirements respectively.

Social connectedness is highlighted as a major factor in wellbeing and health, particularly for older adults. The perceived or real lack of opportunities to be connected socially and with society can have negative impacts on a person's physical, social and mental health.

For the purpose of this review, the impact of intergenerational programs, that involve both adolescents and older adults, on social connectedness outcomes in the older adult group will be explored. The contexts and mechanism by which the program was delivered will also be explored as key parts of the interventions with the result of the review aiming to determine what contexts and mechanisms lead to the most beneficial outcomes for social connectedness. The objective of this realist review is to develop a program theory that guides the development of intergenerational programs involving adolescents and older adults, that impact upon social connectedness in older adults. There is a current gap in the literature addressing programs that involve specifically adolescents and their impact on the domain of social connectedness.

### Review Question

The SPIDER framework was used to develop the review question, which is based on describing the Sample (S), Phenomenon of Interest (PI), Design (D), Evaluation (E), and Research type (R) (Cook et al. 2012).

*Sample:* Adults aged 65 and over and adolescents aged 13-19 that are unrelated and engaged in engaged in intergenerational programs

*Phenomenon of interest:* Any type of Intergenerational programs that involve two non-familial generational groups - adults aged 65 and over and adolescents aged 13-19. Inclusive of intergenerational programs that take place in community settings, including educational and aged care settings.

*Design:* Realist review

*Evaluation:* We will focus on characteristics, views and experiences from qualitative literature. From quantitative literature we will focus on the assessment of outcomes such as social connectedness, social isolation, social loneliness, social support, social participation and social interaction.

*Research type:* Quantitative studies, qualitative studies, mixed methods.

Final review question: *Which circumstances promote social connectedness in older adults participating in intergenerational programs with adolescent?*

**Plan for generation of *a priori* theories:**

*A priori* theories will be developed utilising an iterative, two-part process. This will include an initial scoping search of Medline using the search terms outlined in the *Search Strategy* section below. We will also undertake initial engagement with relevant stakeholder to develop the *a priori* theories. The idea for this review came from a collaboration involving the authors, a municipality in regional Victoria, Australia, and a high school located within that municipality. Originally, the collaboration was centred on the development and evaluation of a pilot intergenerational digital literacy program involving adolescent school pupils and older community-dwelling individuals. However, during the initial stages of designing the program, the authors identified there was an absence of review-level evidence regarding intergenerational programs involving adolescents and older people. A decision was made to undertake a realist review on this topic. Municipal and high school collaborator stakeholders, namely senior teachers, municipal project officers and positive ageing ambassadors, will be involved in the process of generating *a priori* theories by contributing information on the need and opportunity for intergenerational programs in the school environment.

### Search Strategy

The following electronic databases will be searched using English language limitation: MEDLINE, PsychINFO, CINAHL. Google Scholar will be used to supplement the search using a simplified search terms list from below.

Search terms included; (Aged OR "older adult" OR senior OR elder\* OR geriatric OR "old\* person\*") AND ("intergenerational relation\*" OR "intergenerational program\*" OR "intergenerational activit\*" OR "intergenerational practice" OR "intergenerational learning" OR "intergenerational service learning" OR "intergenerational relations" OR intergenerational) AND ("social connect\*" OR "social isolation" OR "social interact\*" OR loneliness OR "social participation") AND ("adolescent")

### Inclusion and Exclusion Criteria

Qualitative, Quantitative and Mixed method studies will be eligible for inclusion

Included	Excluded
Study reported on intergenerational programs	Reported on non-intergenerational programs
Participants from non-familial generations	Studies involving the study of grandparents / grandparenting or family intergenerational relationships
Aged 13-19	Aged <13
Aged 65 and above	Aged 20-64
Published 2000-2020	Published before 2000
Published in English	Not published in English

Where studies include part of the age range and are determined to contribute to the development of the program theory, they will be included. Two reviewers will determine such studies inclusion.

### Study Selection

Two reviewers will determine included studies. Inclusion criteria as above will be applied to the studies retrieved from the search.

### Data extraction and Quality Assessment

Data will be extracted using a bespoke data extraction form. A bespoke quality assessment tool will be developed. Both data extraction and quality assessment will be undertaken by two reviewers.

**Data synthesis**

The aim of the synthesis is to identify potential context-mechanism-outcome configurations (CMOCs) to develop a programme theory about the circumstances that can promote social connectedness in older adults participating in intergenerational programs with adolescent.

**REFERENCES**

Cooke A, Smith D and Booth A (2012) Beyond PICO: The SPIDER Tool for Qualitative Evidence Synthesis. *Qualitative Health Research* 22(10) 1435-1443