Oxford Cambridge and RSA

For issue on or after: Monday 31 March 2025

Level 3 Cambridge Technical in Health and Social Care

05871 Unit 25: Research methods in health, social care and childcare

Pre-release material

To prepare candidates for the examination taken on Tuesday 10 June 2025 – Morning

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number ☐☐☐☐☐ Candidate number ☐☐☐☐

First name(s) ____________________

Last name ____________________

Date of birth D D M M Y Y Y Y

INSTRUCTIONS
- Choose **one** research article and identify a specific focus for further secondary research.
- Undertake further secondary research related to your specific focus. Use **at least two** secondary sources.
- Record your secondary sources on page **9** of this booklet.
- You can summarise your findings on pages **10** and **11** of this booklet to use in the exam.
- Do **not** produce a formal write-up of your research.
- **Seven** days before the exam, hand in this booklet to your teacher. This booklet will be given back to you at the start of the exam.
- Do **not** take any other notes into the exam.
- At the end of the exam, hand in this booklet with your exam paper.

INFORMATION
- You have **five** weeks to undertake your research.
- This document has **12** pages.

ADVICE
- Keep a clear record of your findings as you work through the task.

Research Article A

Supporting the development of scientific enquiry and conceptual understanding in science with deaf and typically hearing preschool children through a home-based science intervention

Extracts from:

Lindsey Jones, Helen Chilton & Anna Theakston (2023) Supporting the development of scientific enquiry and conceptual understanding in science with deaf and typically hearing preschool children through a home-based science intervention, Deafness & Education International, 25:2, 140–155,

DOI: 10.1080/14643154.2022.2102718

Abstract

The study sought to determine the effects of a pilot home-based science intervention on deaf and typically hearing children's conceptual understanding of science and their abilities to reason about and communicate their understanding (scientific enquiry skills). Data show that by age 5 years a science attainment gap exists between deaf children and those typically hearing yet early interventions with deaf children typically neglect the development of science. We created an intervention to support caregivers (N = 17) to incorporate the language of science into their daily routines. Participants were placed into a control or intervention group; within each group were caregivers of deaf and typically hearing children. Over a period of 13 months, caregivers completed five assessments (each at two different time points); four on their child's understanding of concepts and one on their developing scientific enquiry skills. All caregivers, irrespective of group, reported positive gains in their child's conceptual understanding. Caregivers of deaf children reported greater gains in scientific enquiry skills than those of typically hearing children. This offers preliminary evidence to suggest that longer-term interventions may provide an opportunity to narrow the attainment gap between deaf and typically hearing children.

Participants

The participants were caregivers of deaf and typically hearing children recruited through engagement with services for deaf children, preschools, and a recruitment database from the researchers' institution.

Inclusion criteria

The deaf children were required to be established users of hearing aids (behind the ear or bone conduction) or cochlear implants and use spoken English as the first language of the home. All caregivers needed access to a computer and the internet.

Procedure

Caregivers were asked to complete each scientific concept assessment at the start and end of a concept period, set at 12 weeks, before progressing onto the next scientific concept. The only exception was the Scientific Enquiry assessment which was completed at study entry and exit as the development of these skills ran across all concepts. However, many caregivers returned the assessments at dates beyond that requested which extended their length of time in the study. Length of time in the study was considered during the analyses to ensure that any differences observed were not simply a result of differing lengths of engagement in the study between participants.

Conclusion

Our research has provided preliminary evidence that deaf children's scientific understanding and enquiry skills may fall behind those of their peers with typical hearing in the preschool years. However, daily routines in the home can provide opportunities for meaningful interactions about science and may lead to gains in both deaf and typically hearing children's conceptual understanding and scientific enquiry skills, with the potential to narrow the gap in scores between the groups over time.

In prior work, caregivers who participated in this study indicated some degree of variation in their attitudes towards science, but as a group reported an increase over the course of the study in the amount of science talk they engaged in with their children. One possibility is that the increase in science talk underpinned the reported increase in science understanding across all groups found in the current study. However, to further investigate this possibility, detailed analysis of the type of science talk caregivers engaged in with their children is needed.

Research suggests that scientific enquiry should be the focus of science teaching as it is this that supports the development of scientific literacy and attainment in science. Our study has provided some evidence that through interactions in the home, deaf children can display greater gains in scientific enquiry skills than typically hearing children, as assessed by caregiver report, narrowing the attainment gap between the groups. Although we are unable to generalise, this is a discovery that suggests that through longer-term collaborative interventions we may be able to work with caregivers to support the development of scientific enquiry in deaf children and subsequently positively influence their science attainment.

Research Article B

What is the effect of intergenerational activities on the wellbeing and mental health of older people?: A systematic review

Extracts from:

Whear R, Campbell F, Rogers M, Sutton A, Robinson-Carter E, Sharpe R, Cohen S, Fergy R, Garside R, Kneale D, Melendez-Torres GJ, Thompson-Coon J. What is the effect of intergenerational activities on the wellbeing and mental health of older people?: A systematic review. Campbell Syst Rev. 2023 Oct 3;19(4):e1355.

DOI: 10.1002/cl2.1355 PMID: 37795424; PMCID: PMC10546258.

Background

Opportunities for social connection between generations have diminished over the last few decades around the world as a result of changes in the way that we live and work. The COVID-19 pandemic has exacerbated loneliness for many with young and old being kept apart for safety. The Public Health England prevention concordat for better mental health (Office for Health Improvement and Disparities) aims to bring a prevention-focused approach to improving public mental health. The concordat promotes evidence-based planning and commissioning to increase the impact on reducing health inequalities using sustainable and cost-effective interventions that impact on the wider determinants of mental health and wellbeing for children and young people and older people. Intergenerational activities could provide an opportunity to support both populations. In 2023, we produced an evidence and gap map to illustrate the amount and variety of research on intergenerational interventions and the gaps in research that still exist in this area. The review conducted here is based on the evidence in that map.

Objectives

This systematic review examines the impact of intergenerational interventions on the wellbeing and mental health of older people and identifies areas for future research as well as key messages for service commissioners.

Search Methods

We searched an evidence and gap map published in 2022 (comprehensive searches conducted July 2021 and updated June 2023) to identify randomised controlled trials of intergenerational interventions that report mental health and wellbeing outcomes for older people.

Selection Criteria

Randomised controlled trials of intergenerational interventions that involved unrelated younger and older people with at least one skipped generation between them and reported mental health or wellbeing outcomes for older people were included in this review.

Summary of Main Results

This systematic review found 14 randomised controlled trials looking at the impact of intergenerational interventions on the mental health and wellbeing of older people. The quality of the trials and the length of follow-up is poor as is the reporting of equity characteristics. Many relevant outcomes have been studied but often with very little overlap across studies. The exceptions to this are the outcomes of self-esteem and depression which have been measured in three or more studies. The effect size for self-esteem indicates a small positive impact, the effect size for depression indicates little/no impact, but the results are not certain due to the small sample sizes and few studies available. The lack of overlap of outcomes and the lack of studies on similar interventions or interventions with similar elements means it is difficult to determine if any one intervention or intervention characteristic is more or less effective for any given outcome. The primary objectives of many of these studies was not to influence wellbeing, nevertheless, there is some indication that wellbeing was improved. There are likely to be many factors that will influence participants' wellbeing as a result of participating in these types of interventions.

However, this information is useful as it can help us to begin to understand if an intervention isn't appropriate for a particular setting, population activity or to achieve a particular outcome. For example, Grand Friends is an intergenerational intervention where young children visit older people living with dementia in their care home. The results we have been able to report for this study suggest that whilst this intervention may have been able to reduce levels of agitation and increase some reports of pleasure, it did not have the same beneficial effects on quality of life, sadness or improvements in engagement. The rationale for this intervention was that increased engagement during the activity would meet needs for meaningful activity and social engagement and result in improvements in quality of life and sense of community and in decreased agitation amongst those with dementia symptoms who participate in Grand Friends in comparison to a control group with no interaction. This may indicate that whilst some of the desired outcomes were achieved – others were not, and that perhaps engagement during an activity was not the method by which this intervention works, or perhaps the activities set were not appropriate to promote the right level of engagement.

Research Article C

Better quality of life of peritoneal dialysis compared to haemodialysis over a two-year period after dialysis initiation

Extracts from:

Jung, HY., Jeon, Y., Park, Y. *et al*. Better Quality of Life of Peritoneal Dialysis compared to Haemodialysis over a Two-year Period after Dialysis Initiation. *Sci Rep* **9**, 10266 (2019).

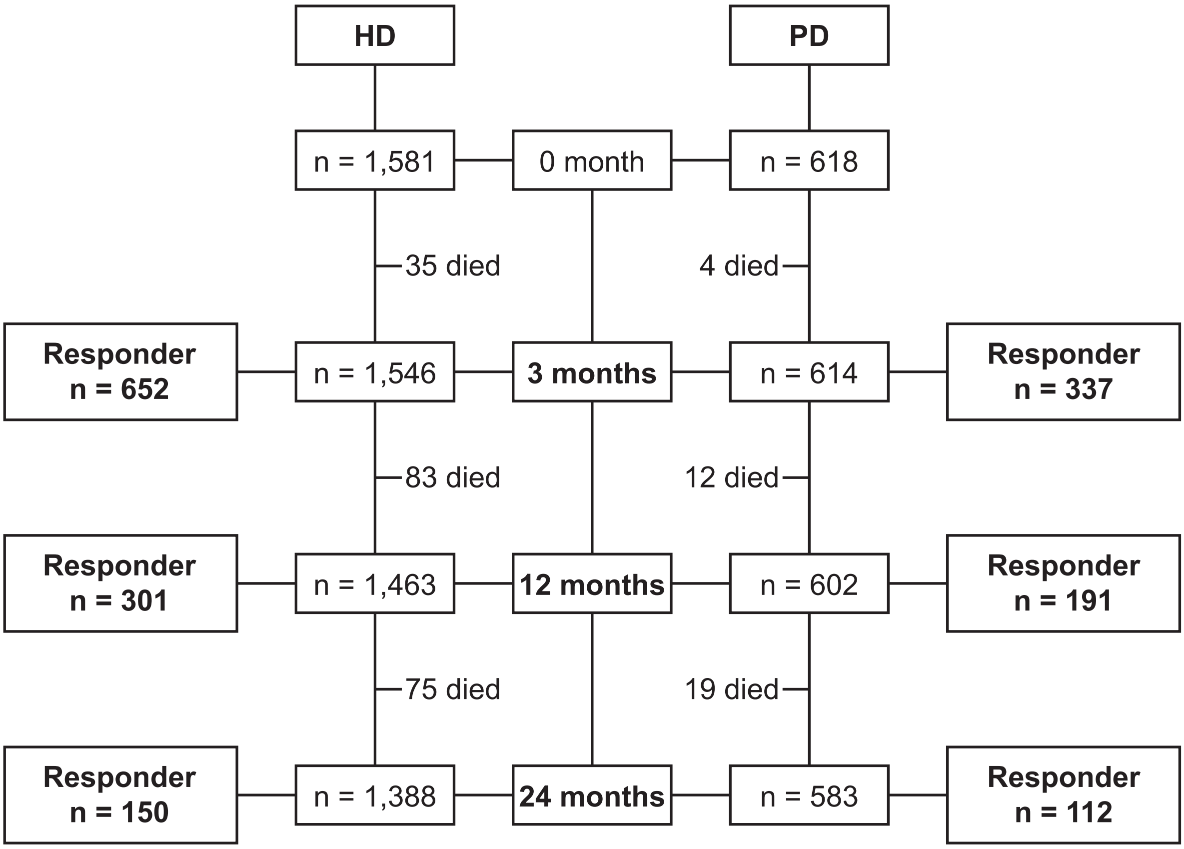
DOI: https://doi.org/10.1038/s41598-019-46744-1

Abstract

This study aimed to compare health-related quality of life (HRQOL) over time in patients initiating haemodialysis (HD) or peritoneal dialysis (PD). A total of 989 incident patients starting HD or PD were included from a prospective nationwide cohort study. HRQOL was assessed 3, 12, and 24 months after the start of dialysis. The scores of questionnaires were adjusted for clinical and socioeconomic parameters. The adjusted three months scores of patients on PD showed better HRQOL in eight end-stage renal disease (ESRD), three physical component summary and one mental component summary domains compared with patients on HD. Both patients on HD and PD experienced significant decreases in different HRQOL domains over two years and the degree of changes in HRQOL over time was not different between dialysis modality. However, the scores of three (effects of kidney disease, burden of kidney disease, and dialysis staff encouragement, all $P < 0.05$) and two (sexual function and dialysis staff encouragement, all $P < 0.05$) ESRD domains were still higher in patients on PD compared with patients on HD at one and two years after initiation of dialysis, respectively. PD shows better HRQOL during the initial period after dialysis even after adjusting for clinical and socioeconomic characteristics, and the effect lasts up to two years. It was similar in terms of changes in HRQOL over time between HD and PD.

Fig. 1

Characteristics of patients

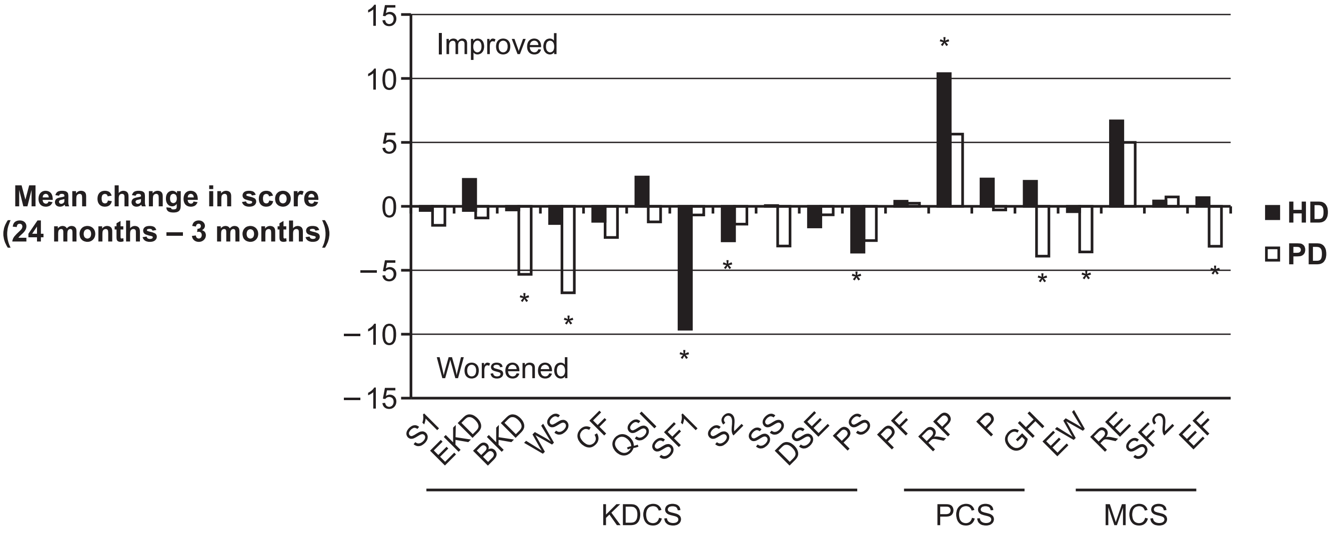


Patient flow. Among the 2,160 survivors (1,546 on HD and 614 on PD) at 3 months after dialysis initiation, 989 patients (45.8%, 652 (42.2%) on HD and 337 (54.9%) on PD) completed the questionnaire. At 12 months, among the 2,065 survivors (1,463 on HD and 602 on PD), 492 patients (23.8%, 301 (20.6%) on HD and 191 (31.7%) on PD) completed the questionnaire. At 24 months, among the 1,971 survivors (1,388 on HD and 583 on PD), 262 patients (13.3%, 150 (10.8%) on HD and 112 (19.2%) on PD) completed the questionnaire.

No significant differences in age, sex, body mass index (BMI), primary renal disease, and employment status were observed between the responders and non-responders. There were significant differences in modified CCI, marital status, and some laboratory parameters between the responders and non-responders depending on the time points and dialysis modality.

Fig. 2

Results



Mean changes in health-related quality of life scores from 3 to 24 months after starting therapy according to dialysis modality. Patients undergoing HD showed significantly worsened HRQOL, shown in mean changes in score, in three ESRD domains, namely, sexual function (−9.6, $P = 0.005$), sleep (−2.7, $P = 0.04$), and patient satisfaction (−3.5, $P = 0.04$), but improved HRQOL in one PCS domain, namely, role-physical (10.4, $P = 0.002$). Patients receiving PD experienced significantly worsened HRQOL, shown in mean changes in score, in two ESRD domains, namely, burden of kidney disease (−5.3, $P = 0.009$) and work status (−6.8, $P = 0.03$), in one PCS domain, namely, general health (−3.8, $P = 0.02$), and two MCS domains, namely, emotional wellbeing (−3.4, $P = 0.02$) and energy/fatigue (−3.1, $P = 0.04$). Abbreviations: BKD, burden of kidney disease; CF, cognitive function; DSE, dialysis staff encouragement; EF, energy/fatigue; EKD, effects of kidney disease; EW, emotional wellbeing; GH, general health; HD, haemodialysis; KDCS, kidney disease composite summary; MCS, mental composite summary; P, pain; PCS, physical composite summary; PD, peritoneal dialysis; PF, physical functioning; PS, patient satisfaction; QSI, quality of social interaction; RE, role-emotional; RP, role-physical; S1, symptom; S2, sleep; SF1, sexual function; SF2, social function; SS, social support; WS, work status. * Indicates $P < 0.05$ in mean changes in health-related quality of life scores from 3 to 24 months.

Conclusion

In conclusion, PD shows better HRQOL during the initial period after dialysis even after adjusting for clinical and socioeconomic characteristics, and the effect lasts up to two years. Both patients on HD and PD experienced a worsening of HRQOL over time in different domains. It was similar in terms of changes in HRQOL over time between HD and PD. It may mean that there is no dialysis modality which has definite advantage in terms of changes in HRQOL over time. It is important to give detailed information and advice regarding HRQOL to patients considering dialysis modality choice. Previous studies have shown that patients are willing to abandon 15–23 months of life expectancy to obtain greater freedom to travel and 7 months to reduce hospital visits; meanwhile, the HRQOL of patients on dialysis has received little academic attention. It is time for nephrologists and dialysis staff to pay attention to the actual preferences and priorities of dialysis patients. Therefore, regular monitoring of HRQOL and depressive symptoms, as well as appropriate intervention to specific symptoms, could be crucial for patients who are forced to take maintenance dialysis for life support.

Please record your **secondary sources** below:

Notes Page