



Oxford Cambridge and RSA

For issue on or after: Monday 21 November 2022

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
Wednesday 18 January 2023 – Afternoon**

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

Centre number

Candidate number

First name(s) _____

Last name _____

Date of birth

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

Child-care self-assessment to improve physical activity, oral health and nutrition for 2- to 4-year-olds: a feasibility cluster RCT.

Extracts from:

Kipping R, Langford R, Brockman R, Wells S, Metcalfe C, Papadaki A, et al. Child-care self-assessment to improve physical activity, oral health and nutrition for 2- to 4-year-olds: a feasibility cluster RCT. *Public Health Res* 2019;7(13)

Background

The Nutrition And Physical Activity Self Assessment for Child Care (NAP SACC) intervention has shown evidence of effectiveness in the USA but not been adapted or assessed for effectiveness in the UK.

Twenty-two per cent of children in England starting primary school are overweight or obese. Preschool children are not achieving the recommended 180 minutes of Physical Activity (PA) per day. Scalable interventions are required that facilitate children to be physically active and to establish healthy dietary habits. Most children in England aged 3–4 years attend some formal child care; therefore, these settings provide an opportunity to create environments that promote adequate PA and a healthy diet.

Objectives

To assess whether or not prespecified criteria relating to the feasibility and acceptability of the intervention and trial design were met sufficiently for progression to a definitive Randomised Controlled Trial (RCT).

To explore the experiences of nursery staff, the intervention delivery team and parents regarding acceptability, barriers, facilitators, fidelity of intervention delivery, data collection methods, participant burden and feasibility of long-term follow-up, with the aim of informing refinement of the intervention and study design prior to a potential full-scale RCT.

To pilot primary and secondary outcome measures and economic evaluation methods and to determine the practicality of data linkage for Body Mass Index (BMI).

Methods

The study was conducted with two phases and two subsequent substudies.

Phase 1- the NAP SACC materials were adapted for use in the UK and a home component was developed. A purposive sample of 16 nurseries in North Somerset and Cardiff were invited to participate in focus groups or telephone interviews to inform the development of NAP SACC UK. Recruited child-care settings sent letters to parents/carers with children aged 2–4 years. The letters invited participation in telephone interviews to discuss the intervention and trial. We conducted interviews with parents/carers until saturation in identifying ways to adapt the NAP SACC intervention was reached. Local authority public health and early years/staff and health visitors were invited to take part in focus groups and interviews to explore which aspects of NAP SACC needed to be adapted, how to involve parents, staff training, participation and adherence.

Following the adaptation of the intervention, we invited parents in North Somerset who took part in phase 1 to participate in a focus group and interviews to discuss the home component.

Phase 2- a feasibility cluster randomised controlled trial with embedded process and economic evaluations.

Participants

The study was undertaken in nurseries in North Somerset and Gloucestershire (England) and the homes of recruited children.

Development – 15 early years/public health staff and health visitors, 12 nursery managers and 31 parents. RCT – 12 nurseries and 31 staff, four partners and 168 children/parents. Mediator substudy – 82 parents and 69 nursery staff. Food photography substudy – four nurseries, 18 staff and 51 children.

Intervention

NAP SACC UK partners supported nurseries to review policies and practices and set goals to improve nutrition, oral health and physical activity (PA) over 5 months. Two workshops were delivered to nursery staff by local experts. A home component [website, Short Message Service (SMS) and e-mails] supported parents. The control arm continued with usual practice.

Data sources

Qualitative data to adapt the intervention. Measurements with children, parents and staff at baseline and post intervention (8–10 months after baseline). Interviews with nursery managers, staff, parents and NAP SACC UK partners; observations of training, workshops and meetings. Nursery environment observation, nursery Review and Reflect score, and resource log. Child height and weight, accelerometer-determined PA and sedentary time, screen time and dietary outcomes using the Child and Diet Evaluation Tool. Staff and parent questionnaires of knowledge, motivation and self-efficacy. Child quality of life and nursery, family and health-care costs. Food photography of everything consumed by individual children and staff questionnaire to assess acceptability.

Results

Thirty-two per cent (12/38) of nurseries and 35.3% (168/476) of children were recruited; no nurseries withdrew. The intervention was delivered in five out of six nurseries, with high levels of fidelity and acceptability. Partners found it feasible but had concerns about workload. The child loss to follow-up rate was 14.2%. There was suggestion of promise in intervention compared with control nurseries post intervention for snacks, screen time, proportion overweight or obese and accelerometer-measured total PA and moderate to vigorous PA. Many parental and nursery knowledge and motivation mediators improved. The average cost of delivering the intervention was £1184 per nursery excluding partner training, and the average cost per child was £27. Fourteen per cent of parents used the home component and the mediator questionnaire had good internal consistency and test–retest reliability. Photography of food was acceptable and feasible.

Limitations

Following nursery leavers was difficult. Accelerometer data, diet data and environmental assessment would have been more reliable with 2 days of data.

Conclusions

The NAP SACC UK intervention and methods were found to be feasible and acceptable to participants, except for the home component. There was sufficient suggestion of promise to justify a definitive trial.

Research Article B

Effectiveness of the dog therapy for patients with dementia - a systematic review

Extracts from:

Klimova, B., Toman, J. & Kuca, K. Effectiveness of the dog therapy for patients with dementia - a systematic review. *BMC Psychiatry* 19, 276 (2019). <https://doi.org/10.1186/s12888-019-2245-x>

Background

Dementia represents a mental and economic burden for both patients and their caregivers. Therefore, the aim of this study is to explore the effectiveness of Animal Assisted Therapy (AAT) with special focus on canis therapy among people with dementia, specifically Alzheimer's disease.

Methods

The key method of this review study is a systematic review of the research studies detected in the Web of Science, Scopus and PubMed. The search was conducted for the studies dating from 2016 till 31 August 2018 because several review studies were published before. Eventually, only six studies were involved into the final analysis.

Results

The findings of this review, based on significant effect sizes, reveal that AAT may work as a beneficial and effective complementary treatment, especially in the area of behavioural and psychological symptoms, for patients with different degree of dementia severity if AAT is targeted at their specific needs and interests.

Limitations

The limitation of this study consists in analysing the results of studies with different methodological approaches to AAT or Animal Assisted Activity (AAA), small subject samples, as well as with different intervention periods. In addition, there was only one study which also measured the effect after the follow up period. All these aspects then might have an impact on the overestimation of the discussed findings. Therefore, standard guidelines for the implementation of AAT are needed.

Discussion

The findings of the studies show AAT or AAA therapies may be effective in the care of patients with dementia. They especially positively enhance patients' behaviour since while being with a dog, patients appear to be calm, relaxed and contented, which results in the reduction of their feelings of depression, anxiety, agitation, and aggression. This was also supported by significant effect sizes. In addition, AAT/AAA contributes to the improvement of social behaviour; the presence of a dog stimulates patients to interact and thus reduces their social isolation and loneliness. These findings have been also confirmed by other review studies and in most previous empirical studies. The repeated multimodal stimulations (verbal, visual, tactile) prove to be feasible and effective. In this study, the intervention took the form of structured play with a dog, which acted as a therapeutic and social agent.

Furthermore, dog therapy can be effective in the improvement of patients' physical health as it was proved in the study on balance, in which AAA had a significant effect ($p=0.03$) on improving subjects' balance and preventing risks of fall in comparison with the control group. The researchers engaged patients in active interactions with the dog and the patients, for example, had to bend down to pick up the ball or they leaned forward to pet the dog. All these movements required a good posture control. Positive outcomes in the area of physical health were also studied, but with modest results.

In addition, dog therapy may also be beneficial for the improvement of cognitive functions, although with modest effects. Interaction with the dog namely requires the patient to pay attention, orientation in his/her environment, or simply it evokes in him/her memories from the past.

Conclusions

The findings of this study reveal that AAT may work as a beneficial and effective complementary treatment (especially in the area of behavioural and psychological symptoms) for patients with different degree of dementia severity if AAT is targeted at their specific needs and interests. Nevertheless, more research in the area of methodology for the implementation of AAT is necessary, and more research should be conducted with respect to the use of AAT for the improvement of cognitive functions in people with dementia.

Research Article C

Foot care education in patients with diabetes at low risk of complications: a consensus statement.

Extracts from:

McInnes A, Jeffcoate W, Vileikyte L, et al. Foot care education in patients with diabetes at low risk of complications: a consensus statement. *Diabet Med.* 2011;28(2):162–167.
doi:10.1111/j.1464-5491.2010.03206.x

Overview

There is currently little consistency in the education provided to people with diabetes regarding foot health and foot self-care. Of particular concern are those patients who are considered to be at low risk of developing diabetes-related foot complications. These patients may receive little, if any, information about these complications and how they might be avoided.

The patient perspective

A number of surveys and studies of patients with diabetes have reported that 23–63% check their feet rarely or not at all [10,12–14]. Other studies have reinforced patients' lack of understanding that diabetes is a serious illness and the need for preventive measures relating to foot complications, such as changing their shoe-wearing behaviour.

Objective

The objective of this consensus statement is to propose a framework for educating patients with diabetes who are considered to be at a low risk of complications. This framework will focus on the importance of attendance at an annual foot screening appointment, maintaining adequate glycaemic control, self inspecting feet regularly for changes in skin colour, breaks in the skin, swelling or pain and reporting those changes to a healthcare professional.

Methodology

A multidisciplinary expert panel met to define and agree a practical educational framework for delivery by all healthcare professionals managing patients with diabetes, particularly those at low risk of developing foot complications. The panel comprised diabetologists, podiatrists, a general practitioner, a psychologist and a pharmacist. The general practitioner was able to provide an alternative clinical view to that of the specialist diabetologist and the health psychologist, which provided a patient perspective. Prior to the meeting, a thorough search of the relevant literature was conducted using online databases, namely Science Direct, NHS Evidence, PubMed and the Cochrane Library.

Additional evidence was included from the authors' knowledge of the literature. The clinical papers this search yielded were reviewed for their relevance to the topic of foot care education in diabetes patients at low risk of complications. Those papers considered to be most relevant were disseminated before the meeting for the experts to review. In addition, the experts were also encouraged to recommend further evidence-based publications.

The nominal group technique focuses on a single goal and, in this case, the goal was to establish consensus on the content of the self-care messages that need to be communicated to those patients who are considered to be at low risk of diabetes-related foot complications. These messages represent the basis for the educational framework that will help to inform diabetes patients at low risk of complications on the importance of foot self-care.

Results

During the expert discussions, four key educational priorities emerged for low-risk patients:

- i. attending their annual foot screening appointment;
- ii. maintaining adequate glycaemic control;
- iii. checking their feet regularly;
- iv. reporting any changes in their feet immediately to their healthcare professional.

Conclusions

There is currently little evidence-based literature to support certain foot care practices. However, this consensus meeting allowed the identification of a number of key elements that need to be communicated in any educational initiative. These elements relate to the management of diabetes as a whole, the timing of foot health assessments by healthcare professionals, reporting any changes in foot health to a healthcare professional and the importance of self-care practices.

These key educational elements for diabetes patients at low risk of complications are captured with the mnemonic CARE:

- i. Control: control blood glucose levels (in accordance with recommendations from your healthcare professional).
- ii. Annual: attend your annual foot screening examination with your healthcare professional.
- iii. Report: report any changes in your feet immediately to your healthcare professional.
- iv. Engage: engage in a simple daily foot care routine by washing and drying between your toes, moisturizing and checking for abnormalities.

Encouraging patients with diabetes at low risk of foot complications to undertake a basic foot care regimen is of critical importance. Basic foot care is simple, quick and empowers the patient in managing their diabetes more proactively, thus reducing the likelihood of complications later on.

Educational initiatives, based on the CARE framework above, should be tailored to the individual and take into account their health beliefs, motivation to change and personal circumstances. The importance of reinforcing the principles of the CARE framework on a regular basis cannot be overstated.

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Notes Page

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