Oxford Cambridge and RSA

For issue on or after: 25 April 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 Friday 17 June 2022 – Afternoon

Please write clearly in black ink.

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** sources.
- Record your 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.

SOURCE A

Extracts from summary of:

An Occupational Therapy (OT) intervention for residents with stroke-related disabilities in UK Care Homes (OTCH): cluster randomised controlled trial with economic evaluation. Health Technol Assess 2016;20(15) Sackley C.M., Walker M.F., Burton C.R., Watkins C.L., Mant J., Roalfe A.K., et al.

Background

Advances in acute care have reduced mortality rates following stroke significantly. As a result, the number of people living with stroke-related disabilities has increased. Approximately one-quarter of all stroke survivors are unable to return home following their stroke and require long-term institutional care. Care home residents living with stroke-related disabilities tend to have increased levels of dependence as a result of cognitive and physical impairments compared with stroke survivors living in the community.

Objective

The predominant aim was to perform a definitive evaluation of OT for stroke and Transient Ischaemic Attack (TIA) survivors in long-term institutional care.

Design

The OTCH study was a pragmatic Phase III, parallel-group, cluster randomised controlled trial with an economic evaluation.

Setting

Eligible homes needed to provide care for older people (nursing or residential) and be registered with the local authority. A list of care homes local to 12 trial administrative centres (TACs) were sourced via the Care Quality Commission database. Care homes from each area were selected at random and invited to participate.

Participants

Residents were eligible for trial inclusion if they had had a confirmed or suspected stroke or TIA at any point prior to study commencement. Residents receiving end-of-life care were excluded. Residents with cognitive and language impairments were purposefully included as these characteristics are representative of the clinical population, thereby ensuring external validity of trial results.

Baseline assessments

The primary measure administered at baseline was the Barthel Index of Activities of Daily Living (BI). Secondary baseline measures included the Rivermead Mobility Index (RMI), Geriatric Depression Scale-15 items (GDS-15), and European Quality of Life-5 Dimensions, three levels (EQ-5D-3L) questionnaire. Proxy data were collected for participants who required consultee assistance. We collected demographic details including age, ethnicity, comorbidities and history of falls.

Intervention and control

In the active intervention, an OT package was delivered by qualified therapists and assistants to both the individual residents and the care home staff. Residents in homes allocated to the control group received their usual care. Critically, this did not include an OT component.

Outcome measures

The primary outcome measure was the BI score at 3 months after randomisation. The BI assesses dependency in 10 categories of self-care: feeding, grooming, transferring from bed to chair, toileting, washing, walking indoors, continence of urine, continence of faeces, dressing and use of stairs. An increase of 2 points in the BI score was identified as the minimal clinically important difference. Secondary outcome measures included the RMI, the GDS-15 and the EQ-5D-3L. All measures were administered at 3-, 6- and 12-month time points.

Economic evaluation

To assess economic viability of the OT package we conducted a within-trial cost–utility analysis.

Discussion

The results of this large cluster randomised trial report neutral findings. The personalised, 3-month course of OT intervention did not have a clinically significant impact on the abilities of older stroke survivors residing in care homes to engage in self-care activities more independently, according to the results of the BI. We also found no evidence of a significant influence of the intervention on any secondary outcome measures. The OT package was not estimated to constitute a cost-effective use of scarce NHS resources.

The majority of participants were graded as severe on the BI at baseline. This level of physical frailty may have limited residents' capacity to engage in therapy. However, the large sample population is representative of the UK care home population with regard to age, sex balance and levels of dependence as a result of stroke-related disabilities.

Conclusion

We did not find evidence to suggest that a 3-month OT package designed for an older care home population with stroke-related disabilities is clinically beneficial, or that it provides a cost-effective use of resources.

Future work

Further research into the effectiveness of environmental adaptations and equipment in promoting independence is required. Changing or adapting the environment rather than trying to retrain the individual resident may be a more effective approach.

SOURCE B

Extracts from:

Efficacy of Oral Collagen in Joint Pain - Osteoarthritis and Rheumatoid Arthritis. J Arthritis 6: 233. doi:10.4172/2167-7921.1000233 Woo T., Lau L., Cheung N., Chan P., Tan K., et al. (2017).

Introduction

Joint pain is one of the most common types of chronic pain. Osteoarthritis (OA) and rheumatoid arthritis (RA) are the two leading causes of joint pain and there are currently no prophylactic or curative treatments available. Oral collagen has been implicated in providing a potential means to treat arthritis. This review article aims to identify, evaluate and summarize the results of published animal and human clinical trials related to oral collagen in the treatment of joint pain caused by OA and RA.

Oral tolerance

Oral collagen can be obtained from a product naturally or processed using enzymes. It has the potential to reduce the progression of OA and RA by inducing an oral tolerance in the arthritic patient. Oral tolerance is a state of immune suppression in response to the oral administration of an antigen. This immune response is a result of reduced systemic delayed-type hypersensitivity, the production of T-cells and cytokines, and suppressed serum antibody responses. Oral collagen can be absorbed via intestinal epithelial cells, Peyer's patches and intestinal dendritic cells and has shown to induce different mechanisms of oral tolerance.

Method

Articles were searched using EMBASE database from 1947 to present, and Medline from 1946 to present. Search terms for keywords and titles included: "osteoarthritis", "rheumatoid arthritis", "joint pain", "oral collagen". Articles containing the following are included in our search: randomized controlled trials, clinical evidence and animal models containing primary quantitative data, in-vitro studies of oral collagen related with joint pain, joint disease, OA or RA. Articles containing non-oral collagen studies, non-joint disease or those that were not related to OA or RA are excluded. Only the clinical studies involving animals or humans were selected for analysis and review. In order to determine efficacy, it was ensured that clinical assessment of the OA response to oral collagen was achieved via WOMAC (Western Ontario McMaster Osteoarthritis Index), whilst that of RA was done primarily through measuring the ACR criteria (American College of Rheumatology). Both WOMAC and ACR are widely employed as means of which to determine changes in the state of patients' OA or RA respectively.

Results

Numerous preclinical and clinical studies have been carried out to investigate the efficacy of oral collagen and both OA and RA. Oral collagen is administered either in an undenatured form or in a partially denatured form for patients with OA, and in general, has been found to be reasonably efficacious, although more trials will be required to confirm and consolidate these findings. In contrast, oral collagen has a more debatable response rate in patients with RA, especially when compared with methotrexate, an existing therapy.

Conclusion

Developing more effective therapies for OA and RA represents a major challenge. At present, available treatments serve to ameliorate symptoms of the diseases, rather than act in a curative manner. Recent interest in oral collagen supplements has sparked preclinical and clinical studies into its efficacy. Preclinical studies have confirmed that the primary mechanism of action of undenatured oral collagen centres on a process of oral tolerance, whilst that of partially denatured collagen may potentially involve stimulation of production of extracellular matrix components. In general, oral collagen has been shown too efficacious against OA when administered as an undenatured or partially denatured form, although insufficient large scale, longer term trials have been conducted to consolidate current findings. Oral collagen's efficacy against RA is to a certain extent still questionable, given that it has shown a better response in comparison to a placebo control, but perhaps not so when compared with methotrexate, an existing therapy for RA. However, oral collagen stands out in its superior tolerability and safety for patients, thus making it a potentially more attractive therapy in the future.

Oral collagen clearly has a role to play in the treatment of OA and the large number of patients affected by the condition would certainly justify further research. With modern day pressures on national health services and funding being withdrawn for joint replacements, an oral treatment with a low side effect profile would be an attractive alternative option.

SOURCE C

Abstract from:

An Exploration of the Outdoor Play Experiences of Preschool Children with Autism Spectrum Disorder. Community-Academic Research Links/University College Cork, Ireland, Blake A. and Sexton J. (2017).

Background

Outdoor play is seen as a crucial and valuable experience for all children. It is not an optional extra, but an essential component of a child's everyday life and environment. Nonetheless, the literature consistently demonstrates that children with disabilities participate less in outdoor play in comparison to their typically developing peers. However, little research exists with regards to the play experiences of children with Autism Spectrum Disorder (ASD) in outdoor play. Thus, establishing the outdoor play experiences of children with ASD is of utmost importance.

Aims

The purpose of this qualitative study was to explore and understand the outdoor play experiences of preschool children with ASD, as a means to better understand what play meant to them, how they experienced play, and to identify the supports required to facilitate their participation in outdoor play in their preschool setting.

Participants/Sampling

Seventeen participants informed the findings of this study: six children in a special ASD class, five mothers, and six members of preschool staff.

Purposive sampling was used to recruit a preschool autism unit of 6 children attached to a mainstream school that was in a rural location, had an equipped playground, and was accessible by researchers. Selected participants were children with ASD, parents, and school staff. The primary focus of capturing the child's experience placed the children as our main participants. Parents of the children with ASD provided unique, intimate knowledge of their child and their home outdoor experiences. Staff members (teachers and Special Needs Assistants (SNAs)) were selected given their day-to-day experience and knowledge of the child and outdoor play at school, where the child spent a significant amount of time.

Materials and Methods

A qualitative methodology was used. The study employed a multi-method approach combining one focus group, semi-structured interviews, playground observations, and projective techniques. First-person perspectives of the children were sought, a rarity in research, that their voices might further illuminate their needs.

Data generation proceeded in the following order: staff focus group, parental interviews, play observation, projective techniques. The focus group as a starting point afforded a broad perspective of the class' play experiences generally. This was carried out with staff-members in the school and lasted 40 minutes. Next, parental semi-structured interviews provided focused information about each child, which equipped researchers to recognise individual aspects of the child's play during the subsequent observation. These were undertaken by both researchers (one interviewed while the other audio-recorded and took notes) in either the parent's home or school, according to their preference, and lasted 40 - 60 minutes. Play observations were carried out on two days at the preschool off-classroom garden and larger playground, when children from the ASD preschool class only were using these spaces. The projective techniques with the children (an image-selection exercise, colouring exercise, and playdough exercise) were tailored to be relevant to their preferences and experiences.

Further, following consultation with the teacher, it was decided that the teacher was best placed to lead the activities due to her experience of communicating with the children. These took place during class-time and were supported by two SNAs. Nineteen colouring sheets with varied pictures depicting outdoor play were shown by the teacher to four children who chose to engage. Each child was required to select and colour their favourite one. They were also provided with playdough to create something related to what they liked to do outside. The final data generation included: 1 focus group, 5 interviews, 1 hour of video-recorded observation, 5 colouring sheets and 30 minutes of video-recorded projective technique activities.

Findings

Three core themes emerged: features of play (freedom to do my thing, being with others), opportunities for play (what is available, when it is available, why it is available), and power of play (how I feel about play, what play does to me).

Conclusion

The findings of this study support the premise that outdoor play is important to children with ASD, and necessary and valuable for them. In this study, outdoor play was highly valued by all participants and strongly supported by teachers and parents. The children with ASD had varied outdoor play experiences relating to affordances at school and home, including social, sensory and physical dimensions. While the children experienced challenges to their play, particularly in social domains, the outdoor context provided unique opportunities for these to be addressed and explored.

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