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Interdisciplinary lifestyle intervention: a pilot study of effects on weight loss

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Abstract

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INTERDISCIPLINARY LIFESTYLE INTERVENTION: A PILOT STUDY OF EFFECTS ON WEIGHT LOSS

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Background/Aims: The aim of this study was to pilot test the effect on weight loss of a novel interdisciplinary lifestyle intervention in the short term.

Methods: A 12 week pilot randomised controlled parallel intervention was conducted in 22 adult volunteers (25-54 years; BMI 25-40 kg/m²) in Wollongong, comparing usual care (general guidelines with practice nurse) with a novel protocol integrating the efforts of exercise physiologists, dietitians, psychologist and medical practitioners. Detailed protocols were developed, with ethics approval. Statistical analysis was conducted using a linear mixed model (SPSS version 21, IBM corporation Armonk NY).

Results: After 3 months the intervention group lost significantly more weight than the control group, adjusted mean difference (AMD) -3.98 kg, 95%CI: -6.17, -1.79; and body fat, AMD -3.25%, 95%CI: -6.05, -0.48. This was reflected in the changes in BMI, (AMD -1.24 kg/m²; 95%CI: -2.05, -0.44) and waist circumference, (AMD -5.14 cm; 95%CI: -7.74, -2.53).

Conclusions: Even at the level of a pilot study, the novel interdisciplinary approach was more effective at achieving weight loss in the short term compared with usual care. The research provided a sound basis for the longer term 12 month trial.

Funding source(s): Illawarra Health and Medical Research Institute

DOES SKIPPING BREAKFAST PREDICT ACADEMIC PERFORMANCE TWO YEARS LATER IN AUSTRALIAN CHILDREN?

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Background/Aims: Skipping breakfast, habitually and in randomized controlled trials (RCTs), has been linked to poorer academic performance in children but little is known about the longer-term effects. This study examined whether skipping breakfast predicted poorer academic performance two years later.

Methods: A national sample of 2,335 8-9 year-old children who participated in the 2008 and 2010 follow-ups of the Longitudinal Study of Australian Children were included in the analysis. In 2008, breakfast consumption was reported by a parent/guardian in three 24-hour food frequency diaries, completed within four weeks. Children who skipped breakfast on at least one occasion were classified as breakfast skippers. In 2010, the child's teacher compared their reading, maths and overall achievement to other children of the same grade (below average/average/above average). Grade 5 National Assessment Program – Literacy And Numeracy (NAPLAN) results were linked. Differences between skippers and non-skippers were calculated using ordinal regression for teacher-reported academic performance, and linear regression for differences in mean NAPLAN results. Analyses were adjusted for sex, age and socioeconomic position.

Results: In 2008, 250 (10.7%) children were classified as breakfast skippers. In 2010, breakfast skippers were slightly more likely to be in lower teacher-reported reading (adjusted RR 1.12; 95%CI: 1.02, 1.24) and overall academic achievement (adjusted RR 1.11; 95%CI: 1.01, 1.23) categories than non-skippers. Skippers had lower mean NAPLAN scores than non-skippers for all five domains but the differences were small (< 2%) and not statistically significant.

Conclusions: Skipping breakfast predicted poorer academic performance two years later compared to non-skippers but the differences were small.

Funding source(s): NHF

WHAT DO SCHOOL-LEAVERS NEED TO KNOW ABOUT NUTRITION AND FOOD SYSTEMS? VIEWS OF PROMINENT FOOD-RELATED EXPERTS IN IRAN

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Background/Aims: The current study investigated food experts' views on what they considered important areas of nutrition and food systems knowledge for school-leavers in Iran.

Methods: Face-to-face or telephone semi-structured interviews were conducted with 28 Iranian experts acknowledged in their field of food and nutrition, including five public health nutritionists, five nutritionists, five dietitians, four food scientists, two environmental scientists, two veterinary physicians, one agriculture scientist and four high school teachers (health teacher, home economics teacher, agriculture science teacher and food science teacher). Participants were drawn from academics in recognised universities and practitioners from professional, governmental and non-governmental organizations. Interviews were transcribed in Farsi and translated into English for analysis.

Results: Experts considered nutrition and food systems knowledge to be important for school-leavers as it is embedded within people's routine life. A nutrition and food systems knowledge framework to assist Iranian school-leavers to make informed decisions in food-related areas was developed,

comprising five major clusters and several sub-clusters. Major clusters included knowledge of: nutrition basics; food production; food selection, preparation, storage and wastage; prevalent nutrition problems (in Iran); and issues for different stages of life. Participants also noted obstacles in teaching food knowledge in engaging ways and identified practical strategies to improve students' knowledge.

Conclusions: These findings provide policy makers and curriculum developers with a framework against which to assess education curricula and practical learning and teaching strategies to optimise students' knowledge of nutrition and food systems. These data will be compared with similar data from Australia.

Funding source(s): N/A

DELIVERING A VERY EARLY NUTRITION INTERVENTION FOR CANCER PATIENTS AT HOME USING TECHNOLOGY: A PILOT RANDOMISED TRIAL

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Background/Aims: This study aimed to effectively deliver a tailored very early nutrition intervention to newly diagnosed upper gastrointestinal cancer patients whilst in their own homes compared with standard nutrition care (SNC), i.e. inpatient referral.

Methods: Patients were randomised to home nutrition intervention (HNI) or SNC. HNI commenced at diagnosis and continued weekly for 18 weeks. Data were collected at baseline, and at the week 26 follow-up. The primary outcome was Health-Related Quality of Life (HR-QOL) using the EORTC QLQ-C30 tool. Nutritional status was evaluated using the Patient Generated-Subjective Global Assessment. Patient perception of nutrition counselling was assessed by questionnaire. Data were analysed using linear mixed model analyses.

Results: At baseline the prevalence of malnutrition was similar between groups (90%). Compared with SNC ($n = 11$), the HNI ($n = 10$) group had a significantly higher EORTC global QoL score (28.4, 95%CI 21.3, 35.4, adjusted for baseline, $p < 0.001$). Six deaths occurred during the study, five in SNC and one in HNI group ($p = 0.06$). Nutritional risk score was lower ($p < 0.001$) and loss of body weight attenuated ($p < 0.001$) in the HNI group compared with SNC. The perceptions about nutrition counselling delivered via phone vs. SNC were not different.

Conclusions: Delivery via telephone of a very early and intensive nutrition intervention, to newly diagnosed upper gastrointestinal cancer patients improved QoL and nutritional markers. This intervention is now being tested using an e-platform to further expand the delivery options of nutrition care to cancer patients in their home.

Funding source(s): Southern Melbourne Integrated Cancer Services; Nutricia Research Foundation

IMPACT OF A NUTRITION PROMOTION SCHEME ON THE DIETARY INTAKE OF TWO-TO-FOUR YEAR OLDS ATTENDING LONG DAY CARE

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Background/Aims: Nutrition promotion schemes such as Start Right Eat Right (SRER) commonly work in partnership with long day care centres (LDCC) to ensure that menus provide 50% age-appropriate nutrient reference values (NRVs). This study aimed to evaluate the impact of SRER on the dietary intakes of children aged 2-4 years while in care.

Methods: Twenty South Australian LDCC participated in SRER and dietary intake (morning/afternoon tea, lunch) of children's aged 2-4 years ($n = 236$ baseline, $n = 232$ follow up) was assessed pre- and post-SRER implementation using the

plate wastage method. Intervention fidelity was assessed. Pre/post comparisons were made using *t*-tests.

Results: At follow up, 80% of centres were fully compliant with the SRER award criteria. Intake increased for all core food groups (range 0.2-0.4 servings, $p < 0.001$) except for vegetables, 0.4 (95%CI: 0.0, 0.9) servings at baseline vs. 0.5 (0.0, 1.0) servings at follow up, $p = 0.083$. Energy intake increased (1629.7 ± 742.7 kJ vs. 1790.6 ± 820.4 kJ, $p = 0.032$), but remained below 50% of the NRV for 2-4 year olds. Macronutrient provision and consumption met the NRV benchmark, except saturated fat. Nutrient provision and consumption met the benchmark, except sodium, potassium and fibre. Food waste (difference between servings provided versus consumed) ranged from 0.1 for dairy foods to 0.3 for grains, vegetables and fruit. The degree of waste was consistent between time points.

Conclusions: The benchmark recommended for LDCC menus may warrant revision to 40% of NRVs. In addition to policy and menu strategies, additional nutrition promotion strategies may enhance children's dietary intake and minimise food waste.

Funding source(s): SA Health, UniSA

MOTIVATORS, BARRIERS AND BENEFITS OF FAMILY MEALS WITH YOUNG CHILDREN IN AUSTRALIA

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Background/Aims: Family meals are likely to be an important setting for nutrition promotion, but little is known about young children's family meals. This study's aim was to investigate motivators, barriers and benefits of family meals with children aged six months to six years.

Methods: Parents of Australian children were invited through websites and blogs to complete an online survey. Ordered logistic regression analyses were conducted.

Results: Preliminary data from 464 parents showed 92% viewed family meals as important, with most agreeing they are a time to promote healthy child eating (91%) and social behaviours (95%), and to connect and talk (90%). Respondents generally enjoyed family meals (95%), though 33% reported they were sometimes a setting for disagreements, and 38% reported difficulty finding time to eat together, with working hours being a common challenge. Topics of most interest to parents were ways to: make eating together easier (37% very interested), make preparing meals easier (37%), grow food at home (38%) and recipes (61%). Frequency of family meals was not associated with child fruit or vegetable intakes, however, frequency of parent and child eating the same foods at dinner was associated with child vegetable intake ($p = 0.04$).

Conclusions: Frequency of family meals is motivated by both nutrition and social factors, but parents face a number of challenges and would like information to address these. Parents and children eating the same foods at mealtimes is likely to be an important influence on child nutrition and a relevant topic for nutrition promotion.

Funding source(s): N/A

NUTRITIONAL KNOWLEDGE OF AUSTRALIAN GENERAL PRACTICE REGISTRARS: RESULTS OF AN ON-LINE QUESTIONNAIRE

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Background/Aims: Nutrition education in entry-level medical courses in Australia is minimal. We aimed to assess nutritional knowledge and self-perceived nutrition competency in registrar members of General Practice Registrars Australia (GPRA), i.e. trainee doctors soon to be working independently as general practitioners (GPs) within the community.

Methods: GPRA invited registrars by e-mail to participate in an anonymous on-line survey taking approximately 8 min to

complete. Hampers worth \$100 were awarded to the 1st, 50th, 100th, 150th and 200th respondents.

Results: While 147 trainees took part, only 89 [20 males (22.5%) and 69 females (77.5%)] completed all questions. Most were aged up to 30 years (48.3%), with 42.7% aged 31 – 40 years. Half (50.6%) were in their first two years; 49.4% had completed 75% or more of the GP training. Given a patient with high cholesterol and LDL-cholesterol, a body mass index of 28 kg/m² and seated blood pressure of 128/85 mmHg, most trainees chose weight loss (84%), reduction of saturated fats (90%), a maximum of two alcoholic drinks/day (82%), and increasing vegetable intake (83%) as 'highly appropriate' strategies. Only 51% put salt reduction in this category; 10% felt this was 'not appropriate'. Two-thirds of trainees (66.0%) were 'moderately confident' (50.5%) to 'very confident' (15.5%) in providing nutritional recommendations; around one-third (29.0%) were 'somewhat confident'.

Conclusions: Despite their confidence in providing advice, GP trainees demonstrated incomplete knowledge of nutritional recommendations. Medical schools must provide doctors with crucial nutritional knowledge to help prevent chronic disease in the community.

Funding source(s): The Almond Board of Australia