

videos were analyzed. Videos in other languages, duplicate videos, and live videos were excluded. A total of 218 videos were reviewed. Video demographics including number of views, likes, and dislikes were recorded. The upload source of each video was classified as news channel, health professionals, health centers, TV channels, government organisations, educational organisations and independent individual channels based on the information given at 'about' section of their YouTube profile. The transparency, utility, reliability and accuracy of video content was assessed using the Journal of the American Medical Association benchmark criteria (JAMA score). Quality of the videos were assessed with Global Quality Score (GQS). **Results** According to the video source, 30.7% of the videos were shared by health professionals including doctors, dietitians, and nurses, whereas 18.7% of them shared by independent users. Educational organisations only shared 5% of the videos. Videos shared by health centers had the highest JAMA score ( $2.2 \pm 0.8$ ) followed by government organisations ( $2.1 \pm 0.7$ ). The independent users and TV channels' videos had the lowest JAMA score ( $1.7 \pm 0.7$ ). GQS was the highest for government organisations' videos ( $3.5 \pm 0.1$ ) whereas it was lowest for TV channels' videos ( $2.8 \pm 0.1$ ). There was a significant positive correlation between JAMA score and GQS of the videos ( $r=0.201$ ,  $p=0.05$ ). According to the assessment of the relationship between length, number of views, likes, dislikes, view and like ratio, there was a correlation between the length of the video, like ratio and GQS ( $r=0.193$ ,  $p=0.004$  and  $r=0.140$ ,  $p=0.039$  respectively). There were not any significant associations between quantitative variables and JAMA score.

**Conclusion** Health professionals, educational and government organisations need to more engage in the spread of nutrition-related COVID-19 information to internet platforms such as YouTube. This will be an effective and immediately implementable public health strategy to effectively spread the right information.

4

#### CLINICAL EVIDENCE BASE SUGGESTING THE IMPROVEMENT IN HEALTH OUTCOMES WITH VITAMIN D3 SUPPLEMENTATION IN PEOPLE AGED $\geq 50$ YEARS IN IRELAND AND THE UK

<sup>1</sup>Emily Royle\*, <sup>1</sup>Kirsty Pourshahidi, <sup>1</sup>Emeir McSorley, <sup>1</sup>JJ Strain, <sup>2</sup>Larry Lacey, <sup>1,3</sup>David Armstrong, <sup>1,4</sup>Sumantra Ray, <sup>1</sup>Pamela Magee. <sup>1</sup>Nutrition Innovation Centre for Food and Health (NICHE), Ulster University, Coleraine, UK; <sup>2</sup>Lacey Solutions Ltd. Skerries, Co. Dublin, Ireland; <sup>3</sup>Department of Rheumatology, Western Health and Social Care Trust, Londonderry, UK; <sup>4</sup>NNEdPro Global Institute for Food, Nutrition and Health, Cambridge, UK

10.1136/bmjnph-2022-summit2022.7

**Background** Vitamin D deficiency, defined as a circulating 25-hydroxyvitamin D [25(OH)D] concentration  $<25$ nmol/L, is a global health issue associated with fractures, all-cause mortality and cancer mortality. Optimizing vitamin D status through supplementation, therefore may improve health-related quality of life, whilst simultaneously reducing healthcare costs associated with these conditions.

**Objectives** This clinical review investigates the effects of vitamin D3 supplementation on these outcomes in adults.

**Methods** Literature review was undertaken between 1<sup>st</sup> February – 31<sup>st</sup> March, 2021. Search terms included 'vitamin D supplementation', 'vitamin D status' and 'risk of fracture', 'cancer mortality' and 'all-cause mortality'.

**Results** A total of 11 systematic reviews and meta-analyses in populations aged  $\geq 50$  years of age were reviewed. Six reviews demonstrated a significant reduction in the risk of fracture, cancer mortality, and all-cause mortality following vitamin D supplementation (table 1). Of the five reviews showing no effect of supplementation, all were conducted in fracture risk populations. Three meta-analyses included studies with participants with an inadequate baseline vitamin D status [25(OH)D  $< 50$ nmol/L]; of these, one review, which investigated fracture risk, showed no benefit of supplementation. Potential beneficial effects of supplementation may have been masked in

**Abstract 4 Table 1** Reviews that reported beneficial effects of vitamin D supplementation on fracture risk, cancer mortality, and all-cause mortality

Author	Outcome	Vitamin D Dose	Vitamin D status (number of studies/ participants)	Age (years)	Follow-up (years)	Relative risk (CI 95%)	P-Value	Key findings
Weaver et al. 2016	Fracture risk	400-800IU/day 500-1200mg/day Calcium	Not reported	$\geq 65$	1-7	0.85 (0.73-0.98)	0.06	15% reduction in risk of total fracture.
Tang et al. 2007	Fracture risk	800IU/day and 1200mg calcium	†Low (10144) Normal (39167)	50-85	3.5*	0.88 (0.83-0.95)	0.004	Calcium with vitamin D associated with a 12% reduction in all fractures. Greater risk reduction with low serum 25(OH)D concentration compared to normal.
Keum et al. 2019**	Cancer mortality	400 -2000IU/day 20,000IU/week 500,000IU/Year	38-83 nmol/L	58-77	3-10	0.87 (0.79-0.96)	0.005	13% reduction in cancer mortality and 7% reduction in cancer incidence over 3–10- year period.
Han et al. 2019	Cancer mortality	400IU/day- 500,000IU/year	Not reported	44-75	4.3-28	0.81 (0.71-0.93)	0.012	Dose-response analysis suggests 7% reduction in cancer risk and 2% reduction in cancer mortality with 20nmol/L increment of 25(OH)D.
Bjelakovic et al. 2014**	All-cause mortality	300IU/day- 500,000IU/year	$<26$ ng/mL (26)	18-107	0.008-7	0.94 (0.91-0.98)	0.002	6% decrease in mortality.
Rejnmark et al. 2012	All-cause mortality	300IU/day- 500,000IU/year	Not reported	53-98	3	0.91 (0.84–0.98)	0.01	7% decrease in mortality.

some studies through the inclusion of vitamin D replete populations.

**Conclusion** While there is some evidence of a beneficial effect of vitamin D supplementation in reducing fracture risk, all-cause mortality and cancer mortality, further research is required. Conflicting findings are likely due to the heterogeneity in study design with the inclusion of young populations, short follow-up times, and vitamin D replete participants at baseline potentially concealing the beneficial effects of supplementation. Further clinical research in vitamin D insufficient/deficient populations  $\geq 50$  years of age within the UK and Ireland is warranted, with the results informing the clinical effectiveness and cost-effectiveness of vitamin D3 supplementation at the population level.

### 5 CROSS-CULTURAL VALIDITY OF THE INTUITIVE EATING SCALE-2. PSYCHOMETRIC EVALUATION IN A SAMPLE OF THE GENERAL POPULATION OF CYPRUS

<sup>1</sup>Evaggelia Basdani, <sup>2</sup>Maria Kyrianiidou, <sup>1</sup>Stavri Chrysostomou, <sup>2</sup>Konstantinos Giannakou\*. <sup>1</sup>Department of Life Sciences, European University Cyprus, Engomi, Cyprus; <sup>2</sup>Department of Health Sciences, European University Cyprus, Engomi, Cyprus

10.1136/bmjnp-2022-summit2022.8

**Background** Intuitive Eating is an adaptive dietary behavior characterized by a reliance on internal hunger and satiety cues instead of situational and emotional cues. The construct of intuitive eating is most often measured using the 23-item Intuitive Eating Scale-2 (IES-2).

**Objectives** To develop the Greek version of the IES-2 questionnaire and to examine its psychometric properties with data collected from 379 participants aged 18–74 years.

**Methods** Forward translations to Greek and backward translation to English were performed. The finalized translated version was administered to a sample of 379 adult, Greek speaking participants in Cyprus for psychometric validation, which included assessment of internal consistency, construct, and concurrent validity. Explanatory Factor Analysis (EFA) was applied to better understand the underlying factor structure of the 23 items in IES-2. Internal consistency was assessed by Cronbach's alpha test in terms of the overall and sub-scales. The concurrent validity was assessed by evaluating the correlation among the IES-2 and the Eating Attitudes Test – 26 item (EAT-26) questionnaire.

**Results** A total of 379 participants completed the IES-2, EAT-26 questionnaire, and a demographic questionnaire. The median age of the participants was 31 (Q1=25, Q3=42) years old. About 49.7% of the participants were from the capital of Cyprus, Nicosia, 48.8% were unmarried, 92.9% had completed a higher education and about 40% were categorized as having a medium monthly average salary. Among the 379 participants of the study, 50.1% had normal Body Mass Index (BMI) category, while 24% and 21.4% were categorized as overweight or obese, respectively. EFA gave a three-factor structure with the total variance explained being 54.41%. Cronbach's alpha as a measure of internal consistency was 0.87 for the IES-2 total score, as well as 0.90, 0.84, and 0.70 for the IES-2 subscale scores. The revised IES-2 total score was significantly correlated with EAT-26 total score ( $r_s = -0.46$ ,  $p < 0.01$ ). The factor loadings on more than one factor were excluded from the next analysis. The results of confirmatory factor analysis indicated that the factor structure on both

scales had adequate fit following the elimination of items and addition of covariance.

**Conclusion** Our findings support the notion that intuitive eating is a viable concept and the IES a useful tool for assessing adult intuitive eating behaviors in empirical and epidemiological studies in the general Greek-Cypriot population.

### 6 COMPARISON OF NUTRITIONAL VALUES AND PRICES OF LOCALLY GROWN AND IMPORTED LEGUMES AND SEEDS

<sup>1</sup>Guler Ertus, <sup>1</sup>Meryem Satilmis, <sup>2</sup>Elif Inan-Eroglu\*. <sup>1</sup>Ankara Medipol University, Ankara, Turkey; <sup>2</sup>University of Sydney, Sydney, Australia

10.1136/bmjnp-2022-summit2022.9

**Background** The increasing health and environmental concerns related to food production and consumption within the process of food globalization have emerged the sustainable diet concept.

**Objectives** This study aimed to compare the nutritional value and price between the locally grown and imported legumes and seeds.

**Methods** We searched 2 chain markets of Turkey and online stores of the food brands and included 15 legumes and seeds including locally grown (chickpeas, cannellini bean, green lentils and red lentils) and imported foods (red beans, black beans, quinoa (black, red and white), buckwheat, mung beans, teff seeds, amaranth, chia seed and flaxseed). Nutritional value (energy, protein, carbohydrate, fat, saturated fat, fiber and sodium) of the food per 100 gram was analyzed. We also compared the price of the foods.

**Results** Among the imported foods, flaxseed has the highest energy (534 kcal) and aft (42 g) content and the lowest carbohydrate content (29 g). Chickpeas have the highest energy (334 kcal) and fat (5.3 g) content whereas green beans has the highest protein content 923 g) in the locally grown foods group. Imported mung beans and locally grown cannellini beans have similar nutritional value. For instance, both mung bean and the cannellini beans have the same amount of energy content (281 kcal). Protein values were also similar (22.2 g for mung beans and 21.8 g for cannellini beans). The most expensive food was the imported quinoa (6.5 Turkish liras per 100 g) and the cheapest food was the locally grown bulgur (1.5 Turkish liras per 100 g).

**Conclusion** We showed that the nutritional value of locally grown foods and imported foods are similar. However, the price difference between these foods is significantly high. While access to locally grown legumes and seeds are easy and slightly cheaper, consumption of imported foods has been increasing due to different factors that push people to consume these foods such as the perception of health value and advertisements of these foods. It is also important to emphasize that uses of the locally grown foods and imported foods are different from each other. Locally grown foods are generally used in traditional Turkish cuisine, whereas imported foods are mostly put into salads to increase the nutritional value. In parallel with increasing use of the imported foods as a part of healthy balanced diet, Turkey has started to grow its own crops such as buckwheat and amaranth in the recent years. This will not only make access easier to these foods but will also provide sustainability in the diet.