An investigation of the vitamin D Knowledge, Attitudes and Practice of UK practising doctors and nurses: the D-KAP study

Emily L Fallon1, Susan A Lanham-New1, Peter Williams1 and Sumantra Ray2

1 Department of Nutritional Sciences, School of Biosciences & Medicine, Faculty of Health & Medical Sciences, University of Surrey, Guildford, Surrey GU2 8HD, UK and 2 NNEdPro Global Centre for Nutrition and Health, Cambridge CB4 0WS, UK

Vitamin D deficiency, defined as plasma 25-hydroxivitamin-D <25 nmol/L, is well-documented in the UK whereby 19% aged 4–10, 37% 11–18, 29% 19–64 and 27% 65+ were recently reported as deficient(1). Hence this is of great research interest and public health concern as vitamin D deficiency has been shown to have key implications for long-term health outcomes in humans(2). Despite guidelines for vitamin D deficiency testing, prevention and management, many healthcare professionals (HCPs) have low self-reported vitamin D knowledge(3–7). Most attitudes towards vitamin D appear positive(3–7), although practices of deficiency prevention and management are limited and inconsistent(8). However, this research is restricted to internationally practising HCPs and has not been applied to UK practising HCPs since updated vitamin D guidelines(9). This presents concern as HCPs are responsible for health promotion and improvement, with patient nutritional status integral.

The aim of this cross-sectional study was to evaluate vitamin D knowledge, attitudes and practice of UK practising primary and secondary care HCPs. The purpose was to evidence the importance of medical and healthcare-related nutrition education for health improvement. A study-specific questionnaire was devised, validated, piloted, and distributed with multiple sampling methods. Descriptive statistics were undertaken, and backward linear regression analyses were performed to identify predictors of vitamin D knowledge and attitudes.

In total, 82 out of 147 eligible HCPs responded, comprising 23 consultant/GPs, 25 nurses, 16 specialist trainees, 10 foundation doctors and 8 core trainees, with most female (74%), practising for >5 years (68%), and without nutrition focus in their degree (71%), or additional nutrition training (73%). Average (SD) overall vitamin D knowledge (scale 0–100) was low: 49 (16%). The job role consultant/GP was the only significant predictor (p = 0.020) of superior vitamin D knowledge: +8.863% [95% CI 1.430–16.296] (r² = 0.066). Most respondents (94%) had positive overall attitudes towards vitamin D, with an average score of 69% (12%), but no significant predictors of attitude were identified. Most (78%) used vitamin D supplements to manage vitamin D deficiency, commonly D3 (57%), meeting clinical recommendations. However, dosing was inconsistent and lifestyle advice regarding sunlight exposure, diet and nutrition, was found to be minimal, recommended by 50% and 49%, respectively.

The present study outlines low vitamin D knowledge of UK HCPs, positive attitudes towards vitamin D and certain limitations in practices of managing vitamin D deficiency. The findings identify urgent need for HCP nutrition education to help attenuate vitamin D deficiency prevalence.

The author would like to thank Susan Lanham-New and Sumantra Ray for their help designing the study, and reviewing the draft manuscript; Katherine Hart, Ruan Elliot, Denise Robertson, Elaine Macaninch, Kathy Martyn and Luke Buckner for reviewing the questionnaire; Andrew Barnes for his help creating the questionnaire on Qualtrics; Timothy Eden, Rajna Golubic, and Elaine Macaninch from the Global Centre for Nutrition and Health (NNEdPro) Virtual Core for their help distributing the study questionnaire; and Peter Williams for helping to guide the statistical analyses.

References: