Behaviours 2

OP65 A SYSTEMATIC REVIEW OF THE PREVALENCE OF SMOKING IN HEALTHCARE STUDENTS

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Background Smoking continues to pose a huge cost to an individuals' health and the healthcare economy. Healthcare professionals are known to have an authoritative influence over patients and are well placed to promote abstinence from tobacco. Indeed, Articles 12 and 14 of the Framework Convention on Tobacco Control (FCTC) make several recommendations concerning smoking behaviour and cessation training amongst healthcare professionals. The current study estimates the prevalence of smoking in healthcare students, healthcare professionals of the future, across the six World Health Organisation regions.

Methods Five databases (Medline, Embase, CINAHL, CAB abstracts, LILACS and the WHO Global Healthcare Professional Survey database) were searched to identify studies including any profession of healthcare students. Studies were published between January 2000 and March 2016, and no restrictions were placed on language of publication. Titles, abstracts and full texts were checked for eligibility independently by two authors and the quality of the included studies was assessed. Pooled prevalence with 95% confidence intervals (CI) were estimated using random effect models, with heterogeneity quantified using I^2.

Results 417 papers were included: 214 studies and 203 Global Health Professional student surveys. Healthcare professions included medicine, nursing, dentistry, pharmacy, and mixed groups. The prevalence of smoking across all healthcare students was 19% (95% CI 17%–21%, I^2 99.98). Subgroup analysis by year shows the prevalence of smoking in healthcare students appears to be increasing; from 16% (95% CI 16%–17%, I^2 99.23) up to and including 2010 to 19% (95% CI 6%–31%, I^2 99.99) between 2011 and 2016. Pooled estimated smoking prevalence within the WHO regions for medical students ranged from 10% to 25%, and nursing students from 0% to 30%. Estimates for both were highest in Europe and lowest in Africa.

Conclusion Smoking prevalence among healthcare students varies widely across professions and WHO regions, however remains worryingly high in light of the key role healthcare professionals play in tackling the global smoking epidemic. In order to continue to make progress with implementation of the FCTC, urgent efforts need to be made to reduce smoking behaviour amongst healthcare students, which will ultimately contribute to the reduction of smoking prevalence amongst their patients.

OP66 MOTIVATION TO QUIT SMOKING AND CHANGES IN CIGARETTE CONSUMPTION, AMONG SMOKERS WHO USE E-CIGARETTES, FINDINGS FROM THE HEALTH SURVEY FOR ENGLAND

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Background The majority of people who use e-cigarettes are dual users with tobacco cigarettes. E-cigarettes may aid smokers with their quit attempts and reduce cigarette consumption or reinforce nicotine addiction. This study explores the motivations for current and previous use of e-cigarettes, and whether use is associated with reporting lower or higher cigarette consumption than a year ago. It makes comparisons with other traditional nicotine delivery products (NDPs).

Methods This study uses a sample of current smokers aged 16 + (n=3,039) from the nationally representative, cross-sectional Health Survey for England, HSE2013–2014, (HSE2015 data will be included when archived). Firstly, multinomial logistic regression models were conducted on the odds of a) Never use of e-cigarettes versus b) Current use of e-cigarettes c) Previous (not current) use of e-cigarettes, and key exposure included the intentions to quit smoking scale (No intention/Pre-contemplation/Contemplation/Preparation (within next 3 months)). Secondly multinomial logistic regression was carried out on the odds of reporting smoking a) the same number of cigarettes versus b) more c) fewer than a year ago. Models were repeated using never, current and previous use of other NDPs. All models adjusted for sex, age-group, highest qualification and cigarette consumption. Analyses were conducted using Stata.

Results 12% were current users, and 20% previous users of e-cigarettes. Compared with never use of e-cigarettes, no association was found with age and current use, while being younger was associated with previous use (45–54 v. 16–34 years, OR=0.68 [95%CI 0.46–0.79]). Conversely, current and previous users of NDPs were more likely to be older than never users of NDPs (45–54 years 2.07 [1.29–3.30]). Quit intentions had a dose response relationship with the odds of current e-cigarette use (e.g. Preparation versus No intention (3.14 [2.24–4.42]); for previous e-cigarette users the magnitude was smaller (1.39 [1.04–1.87]). However, 'Preparation' had stronger associations with other NDPs, for both current (8.93 [5.54–14.40]), and previous use (3.18 [2.47–4.09]). Being a current user of e-cigarettes (1.77 [1.36–3.20]) or other NDPs (1.72 [1.19–2.50]) increased the odds of reporting smoking fewer cigarettes than the previous year; previous use was not significant. E-cigarette use was not associated with reporting smoking more than the previous year, however current use of NDPs was (1.84 [1.13–3.01]).

Conclusion Current or previous e-cigarette use is unlikely to increase consumption of cigarettes compared with a year ago, but smokers who used them had weaker intentions to quit smoking than smokers who used other NDPs. Longitudinal research is needed to track changes in consumption involving duration of e-cigarette use to further verify findings.

OP67 ACTIVITY LEVELS IN MOTHERS AND CHILDREN DURING THE TRANSITION TO PRIMARY SCHOOL: FINDINGS FROM THE SOUTHAMPTON WOMEN'S SURVEY

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Background Parental physical activity (PA) is frequently investigated as a potential correlate of preschool-aged children's PA, yet there is little information about how the association between parent-child PA changes during the transition to formal schooling. We aimed to determine the association between objectively measured maternal and 6-year-old children's PA, exploring how this association differs by demographic and temporal factors; and 2) identify how this association changes during the transition to school (from 4–6 years).

Methods Data were from the UK Southampton Women's Survey. PA levels of 530 6-year-olds and their mothers were measured concurrently using accelerometry for up to 7 days. Two-level mixed-effects linear regression was used to model the association between maternal-child PA at age 6 [average activity intensity (ACC); minutes spent sedentary (SED); and in moderate and vigorous PA (MVPA)]. Interactions with demographic and temporal factors, and how the association differed across the day (morning (6–9am); school (9am-3pm) and evening (3–11pm)), were tested. Change in the association between maternal-child PA (at age 4 and 6, n=170) was also assessed.

Results At age 6, mother-child daily PA were positively associated at all activity intensities: ACC: β=0.24 [95% CI: 0.19, 0.30] counts per minute; SED: 0.23 [0.20, 0.26] minutes/hour; MVPA: 0.53 [0.43,0.64] minutes/hour. The association was stronger between mother-child PA at all intensities at the weekend (vs. weekdays: ACC: $\beta_{interaction}$=0.16 [95% CI: 0.06, 0.25] counts per minute; SED: 0.07 [0.02,0.12] minutes; MVPA: 0.44 [0.24,0.64] minutes). For SED, the mother-child association was stronger for children with older siblings (vs. none); for MVPA, the relationship was stronger for those who had both younger and older siblings (vs. none). Longitudinally, the mother-child association did not differ with age for SED and light PA (LPA); mother-child ACC and MVPA were significantly weaker at age 6 compared with age 4 (difference in ACC: −0.23 [-0.37,–0.10], MVPA: −0.16 [-0.31,–0.00]). This difference was driven by a weaker relationship in the mornings and during the school day (9–3pm).

Discussion Maternal-child PA levels are positively associated at age 6, with stronger associations at weekends, and in those with siblings in the home. From age 4 to 6 years, the mother-child ACC and MVPA association weakened. This may reflect decreasing co-participation with age, as children gain independence/engage in more structured PA at school. Different intervention foci may be needed before and after the transition to school, but family-based PA remains an important element of children's overall PA.

OP68 PHYSICAL ACTIVITY TRAJECTORIES AND PREDICTORS DURING THE TRANSITION TO OLD AGE

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Background Maintaining physical activity during later life is associated with optimal health; however, research on the long-term trajectories of physical activity into old age and their predictors has been limited. This study aimed to identify distinct 20 year trajectories of physical activity spanning from midlife to old age and predictors of physical activity trajectories.

Methods Participants were men drawn from the British Regional Heart Study, a prospective cohort study, involving 7735 men recruited from Primary Care Practices in 1978–80. Men were followed up after 12, 16 and 20 years, reporting physical activity levels (walking, cycling, recreational activity and sport/exercise), health status and socio-demographic characteristics. Group-based trajectory modelling was applied to identify distinct trajectories of physical activity and to examine the effects of predictor variables on trajectories. Predictors of trajectory group membership were examined using multinomial logistic regression. The effects of developing cardiovascular disease and changing employment status on trajectories were estimated for each trajectory group.

Results 7658 men (mean baseline age 50.2±5.8 years) providing valid questionnaire and physical activity data (of which 78% provided activity data at ≥2 surveys) were included in analyses. Three distinct trajectories of physical activity emerged: low decreasing (34.1%), low stable (45.8%) and moderate increasing (20.1%). Membership of the moderate increasing trajectory group was predicted by being married, having children, drinking alcohol and eating breakfast. Men with manual occupations, men residing in regions other than the South, men who were overweight/obese, men with doctor-diagnosed health conditions and men who smoked were less likely to be in the moderate increasing trajectory group. Being employed was associated with an increase in physical activity in the low decreasing group (β 0.43, p<0.001) but a decrease in the low stable (β −0.22, p<0.001) and moderate increasing groups (β −0.84, p<0.001). Development of cardiovascular-related conditions was associated with a decline in physical activity in the low decreasing (β −0.42, p<0.001) and low stable groups (β −0.13, p<0.05) but was not associated with any change in the moderate increasing group (β −0.06, p=0.34).

Conclusion This study highlights the heterogeneity in physical activity levels over time in older adults and that activity levels in midlife are likely to dictate trajectories into old age. Efforts to promote physical activity in later life may need to focus attention earlier in the lifecourse. The effects of retirement and cardiovascular disease on physical activity may depend on prior activity trajectories. Thus, different strategies may be needed in these groups.

Ageing 2

OP69 CIRCULATING N-3 POLYUNSATURATED-FATTY ACIDS AND THE MAINTENANCE OF HEALTHY AGEING IN OLDER ADULTS, THE CARDIOVASCULAR HEALTH STUDY

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