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EXAMINING THE ASSOCIATIONS BETWEEN ORAL HEALTH AND SOCIAL ISOLATION: A CROSS-NATIONAL COMPARATIVE STUDY BETWEEN JAPAN AND ENGLAND

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Background In Western countries, the most important part of the face in communication is the mouth, whereas it is the eyes in Asian countries; thus oral health could be more important in social interactions in Western countries. Our aim was to examine differences in the association between oral health status and social isolation among older people by comparing Japan and England.

Methods We used cross-sectional information obtained from adults aged 65+ in two ongoing prospective cohort studies: The Japan Gerontological Evaluation Study (JAGES, N=120,195) and the English Longitudinal Study of Ageing (ELSA, N=3,958). The dependent variable, social isolation score (SIS) was calculated from five factors (marital status, social support from children, social support from family, social support from friends, and social participation). The independent variables were self-reported number of remaining teeth (0, 1–9, 10–19, ≥20) and denture use (≥20 teeth, ≤19 teeth with denture, ≤19 teeth without denture), while the covariates in the model were: sex, age, educational attainment, self-rated health, number of comorbidities, household annual equalized income, mental health status, daily living activities, and smoking status. We examined associations between oral health status and SIS by applying an ordered logit model by country.

Results Compared to England, more Japanese participants were socially isolated (1.4% vs. 5.8%), but fewer were edentulous (13.1% vs. 7.7%). In both countries, poorer oral health further increased the odds of being socially isolated. Pooled analysis of the ordered logit model with an interaction term showed that the association of number of remaining teeth with SIS was stronger in edentulous participants and in England (odds ratio=1.50, 95% Confidence interval:1.26–1.80).

Conclusion In both countries, having fewer remaining teeth and not using dentures were associated with greater social isolation but the association was higher in England, as we hypothesized. Furthermore, even if they use dentures, participants in England could be more isolated. Our results suggest that higher social impact can be placed on maintaining teeth in Western culture than in Eastern culture.

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CAPTURING PATIENT REPORTED OUTCOME MEASURES (PROMS) AND HEALTH DATA FROM SMART DEVICES: ATTITUDES OF THE GENERAL PUBLIC

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Background HDR UK Scotland has proposed to set up an electronic data resource, the 'Scottish birth e-cohort', which links existing survey and healthcare datasets for everyone born in Scotland since 1975. Adding PROMs and health data from smart devices to this resource would provide a holistic picture of population health. We conducted a qualitative study to investigate the general public's willingness to share PROMs and health data from smart devices with researchers and what facilitators and barriers exist for doing so.

Methods We carried out a literature review on existing knowledge and developed a schedule for semi-structured interviews. Eighteen respondents were recruited through the Scottish Health Research Register; the purpose was to recruit a representative sample of the Scottish birth e-cohort by age, gender and the Scottish Index of Multiple deprivation. We applied framework analysis to allow for inductive coding of open-ended accounts and deductive coding of pre-defined themes using NVivo 12 Pro software and manual coding.

Results We developed nine themes that summarise facilitators and barriers of data sharing. 1) 'Researchers are trusted partners' refers to the prevailing views that research is beneficial for everyone; people trust universities' research governance and are therefore willing to share their data. 2) Trust is conditional on data security and research transparency. Clear communication about research processes and data security facilitates the willingness to share the data. 3) Vagueness around data security and research transparency is a barrier. 4) Data collection by smart devices was mainly perceived as a facilitator. Smartphones are a normal part of everyday life and can make data sharing quick and easy. 5) Lack of technology and special needs are the barriers for vulnerable population groups. 6) Perceived usefulness is a facilitator of data sharing. 6) Lack of usefulness is a barrier because it contributes to demotivation. 8) Respondents discussed the willingness to share the data in the context of data sharing norms and culture, and 9) Perceived contextual threats. Younger generations already use smart devices to share personal information; however, they acknowledge potential data breaches.

Conclusion Respondents viewed university researchers as trusted partners and expressed willingness to share the data because of perceived public benefit. The critical issues to address are: 1) ensuring transparent communication of research processes, 2) how to maximise the perceived usefulness of data sharing, and 3) how to include all population groups in public health research which utilises smart devices and standardised questionnaires.

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USING EHEALTH SYMPTOM MANAGEMENT TECHNOLOGY DURING CANCER TREATMENT: THE LIVED EXPERIENCES OF PEOPLE WITH COLORECTAL CANCER AND THEIR FAMILY CAREGIVERS

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Background eHealth technology has been valued as a means to improve the health outcomes of people with cancer and their family caregivers. Although the evidence on effectiveness of eHealth is promising, a gap in the knowledge-base exists

regarding the lived experience and personal meaning of using supportive technology during the cancer experience. The aim of the current study is to explore the psychosocial experiences of people with newly diagnosed colorectal cancer using eHealth symptom management technology and their family caregivers during chemotherapy in an outpatient setting in Ireland.

Methods This research adopted an innovative longitudinal and multi-perspective interpretative phenomenological study design. Participants with Stage I-III colorectal cancer in the European randomized controlled trial of the symptom management technology, The Advanced Symptom Management System (ASyMS), were recruited for study. Semi-structured interviews were conducted with participants at two time-points i.e. while using the device and after it was returned during their chemotherapy treatment. Participants with colorectal cancer (n=3) were asked to nominate a family caregiver (n=4) to participate in separate interviews at the same time-points. All interviews were audio-recorded, transcribed verbatim and analysed using interpretative phenomenological analysis.

Results eHealth symptom management technology can be an educational and reassuring tool which can promote self-efficacy and a sense of control amongst people with cancer. Similar benefits were evident amongst their family caregivers even though they did not personally use the eHealth technology. The longitudinal design highlighted how people with colorectal cancer and their family caregivers developed a strong personal attachment to eHealth technology and likened it to another person in their family. Despite initially feeling abandoned after the technology was returned, both participant groups recognised that it had prepared them to manage their symptoms independently.

Discussion While previous studies regarding eHealth technology in oncology have focused on achieving clinically meaningful outcomes, this study offers a psychological understanding of using supportive technology during the cancer experience. This research illustrates how eHealth technology can have psychosocial benefits for people with cancer, family caregivers and their dyadic relationship which surpass the intended health outcomes of the technology. This study offers a unique perspective of people's attachment to technology during cancer treatment which has not been adequately studied previously. Findings from this research can inform future technological design, enhance oncology practice and ultimately improve the health outcomes of its users in the future.

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PALLIATIVE CARE PROVISION IS ASSOCIATED WITH REDUCED PREVALENCE OF DEATH IN HOSPITAL: POPULATION-LEVEL PANEL DATA FROM 30 EUROPEAN COUNTRIES IN THE YEARS 2005–2017

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Background Studies of individual-level data report that palliative care (PC) availability is associated with lower risk of death in hospital.

Methods We compiled a cross-national longitudinal dataset to identify factors associated with hospital mortality rate in

Europe across the years 2005–2017. We sought place of death data from the national statistics offices of the 32 EU-EEA countries. Data on palliative care availability by country were collected from the European Association of Palliative Care (EAPC) Atlases. Our primary predictor of interest was binary: in a given nation in a given year, did the palliative care provision meet EAPC recommendations, controlling for population size and age distribution? We collected additional predictors hypothesised to be associated with outcome from Eurostat, OECD and WHO: indicators of national wealth, societal factors, population health, and other health system variables. Our final dataset included 30 countries, excluding Greece (no outcome data) and Liechtenstein (which does not have its own palliative care services). We used linear regression with panel-corrected standard errors to assess association between hospital mortality rate, palliative care availability and other factors. Sensitivity analyses were performed to check robustness to imputed data. We took $p < 0.05$ to represent statistical significance.

Results Average hospital mortality rate ranged from 27% to 67% over the observation period, with notable differences between Eastern, Southern and North(wester)ern nations both cross-sectionally and over time. The regression analysis found palliative care provision was significantly associated with lower hospital mortality rate: services in line with EAPC recommendations was associated with a 4.3% lower hospital mortality rate (95% CI: -2.8% to -0.3%; $p = 0.01$). With respect to the national economic indicators, low HDI countries groups were significantly associated with high hospital mortality, with south countries showing the highest hospital mortality rate. In the healthcare policy domain, government funding of long term care, and lack of assistance in functional issues were significantly associated with decreased hospital mortality. Avoidable death rate, total healthcare spending on ambulatory care, and home care provision were significantly negatively associated with hospital mortality. With respect to healthcare system, the number of total hospital beds and the percent of population with unmet need due to financial reasons were significantly associated with lower hospital mortality, while the mean hospital length of stay showed significant positive association with hospital mortality.

Conclusion Hospital mortality rates varied markedly between countries and were changing in different directions over time. Palliative care access increased in the observation period and was associated with lower hospital mortality rate. Additionally, significant associations between outcome and economic, societal, and health system factors were identified in our analysis.

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COST-BENEFIT ANALYSIS OF ADVANCE CARE PLANNING FOR THE END OF LIFE: A SOCIETAL PERSPECTIVE

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Background The aging population of the UK is associated with rising health and social care spending. The need for sustainable provision of end-of-life care is therefore a public health priority, with successive governmental strategies aiming to reduce the proportion of people dying in hospital. Advance care planning (ACP) supports patients to make and