开发教育材料以促进小学生和初高中生对癌症的意识和正确理解

研究概要（和文）：小学生时期的生活习惯会对成年后的健康产生影响。因此，学校应该教育学生形成健康的生活方式。通过研究英国和澳大利亚的健康教育，我们发现这两个国家在健康和癌症教育上有着丰富的经验和有效的方法。英国和澳大利亚的健康教育部门协作开发教育材料，英国强调在幼儿时期预防肥胖，澳大利亚则注重户外活动，但在老年时要避免紫外线照射。两个国家都有效地进行了HPV教育。我们目前正将英国的教育材料翻译成日语。

研究概要（英文）：约40%的癌症是由生活方式引起的，而且每2个日本人中就有1人会死于癌症。由于不良的生活习惯在儿童时期就已形成，因此学校应教育学生如何保持健康的生活方式。通过研究英国和澳大利亚的健康和癌症教育，我们了解到了这两个国家有着悠久的健康促进学校历史。我们希望借鉴他们的经验，开发适合日本的小学和中学教育材料。在英国，营养和体育活动的推广被看作是防止成人癌症风险的关键，因此从小就开始强调健康饮食和运动。在澳大利亚，由于阳光明媚，户外活动很常见，但在老年时要避免紫外线照射。两国都有效地进行了HPV教育。我们目前正在翻译英国的教育材料以在日本使用。

研究领域：应用科学

关键字：健康教育、癌症、教育开发、健康促进、中小學生
1. 研究開始当初の背景
   About 40% of cancers are lifestyle related and one in two Japanese will die of cancer. In 2007, the Japanese Cancer Control Law was enacted, promoting a healthy lifestyle through healthy eating, exercise and no smoking. Since many unhealthy lifestyle habits are formed during childhood, it is important that children are taught about how to lead a healthy lifestyle and one of the best places to do this is in school.

2. 研究の目的
   By investigating how health and cancer education is taught in the UK and Australia, countries with a long history in this field, we hoped to be able to develop cancer/health education materials for Japanese primary and junior high school children, with a particular focus on HPV and cervical cancer prevention, since the HPV vaccine is given during adolescence.

3. 研究の方法
   We visited 4 primary schools in Scotland, the WHO Collaborating Centre for International Child & Adolescent Health Policy Child and Adolescent Health Research Unit at the University of St Andrews, Jo’s Cervical Cancer Trust, Cancer Research UK, the Australian HPV Cancer Registry and the Cancer Council Victoria, in Australia, to obtain insight into how health/cancer education was taught to children and you adults.

4. 研究成果
   Given their different geographical locations, the UK and Australia have different environmental risk factor for cancer, the sun in Australia, and obesity in the UK. While, the good weather encourages children, to be active and pay outside, reducing their chance of becoming overweight or obese, exposure to UV radiation from an early age, increases their risk of skin cancer later in life. For this reason, most of cancer prevention activities in schools have a large focus on skin cancer prevention. Conversely, due to the poor weather in the UK, children are more likely to be indoors, and in the present digital age, on an IPad or computer. This inactivity increases their risk of being overweight and/or obese, a well-known risk factor for many cancers later in life, so many interventions and initiatives have been developed to deal with this issue. HPV-related cancers are common to both countries, and this issue has been tackled well with successful HPV immunization programmes. In both countries, the Departments of Health and the Departments of Education cooperate and work closely together to develop a curriculum most suitable for the children’s health education needs.

Report 1: Health/Cancer Education in the UK (Scotland)

The Curriculum for Excellence
https://www.educationscotland.gov.uk/Images/all_experiences_outcomes_tcm4-539562.pdf)

In Scotland, the Curriculum for Excellence is aimed at 3-18yr olds in order that they develop the following 4 capacities to become: successful learners, confident individuals, responsible citizens and effective contributors. The curriculum has eight areas, one of which is Health and Well-being, which is taught across all 16 years of the curriculum, even including the younger ages. An example of how this works would be to use colors to teach about healthy foods with 3-5yr olds. Obesity is a serious problem for Scottish children and as well as all schools having to provide 2 hours of physical education per week, national government programs such as Jog Scotland and local government programs such as BEST Fife (Figures 1.1 and 1.2) provide children with free access to running clubs and sporting facilities.

For adolescents, as well as classes on the hazards of smoking and excess alcohol consumption, HPV vaccination takes place in S1, S2 providing both girls and boys with an opportunity to learn about HPV related cancers (See Report 2).

-The WHO Collaborating Centre for International Child & Adolescent Health Policy Child and Adolescent Health Research Unit at the University of St Andrews (http://www.cahru.org/)
The Child and Adolescent Health Research Unit (CAHRU) is a specialist research unit that conducts research on all age groups of children from the early years to the late adolescence when young people are embracing on young adulthood. Past studies have included: Evaluation of the Fit for Girls programme; Control of Adolescent Smoking Study (CAS); Health Promoting School Profiling; Scottish Physical Activity Research Collaboration (SPARColl); Walking Behaviour in Adolescent Girls and Young People, Physical Activity and Food Choices Study (Figures 1.3 and 1.4).

In Scotland, the notion of Health Promoting School is still strong and the NHS works in close collaboration with the Department of Education at both the regional and national level. School dinners are provided for free to primary 1-3 pupils and free fruit is also available to these age groups.

Health/Cancer Education in Australia - National SunSmart Schools

Due to the high incidence of malignant melanomas, a large focus of health/cancer education in Australian children is sun-care. The Australian Cancer Council has introduced a National SunSmart Schools Program to tackle this issue, since children are in schools when UV radiation levels peak (http://www.cancer.org.au/preventing-cancer/sun-protection/sunsmart-schools/).

Measures include, shaded play areas, reschedule/minimise outdoor activities during peak UV periods of the year and teaching, modeling and reinforcing and reinforcing positive sun protection behavior. Online resources for primary schools are also available (Figs 1.5-1.6). (http://www.cancer.org.au/preventing-cancer/sun-protection/sunsmart-schools/primary-school-resource.html).

The ‘positive’ side to the good weather, is Australian children are more active than their UK counterparts, so obesity is less of an issue.

-HPV Related Cancers

Australia was the first country to introduce a national cervical cancer vaccination programme. From 2007, girls aged 12-13yrs have been vaccinated against HPV and from 2013, boys of the same age have been included, making it an ‘HPV-related’ cancers vaccination programme. There was a 2 year catch-up programme for girls to the age of 26yrs and a 2 year catch-up for boys up to the age of 15yrs. Both catch-up programmes have now finished.

Professor Raechael Skinner of Sydney University has developed an educational intervention programme for school and the Cancer Council also have a variety of online resources. As with the UK, uptake is high and with robust safety and effectiveness surveillance, the programme is proceeding smoothly. http://takechargehpv.org/#/home http://www.hpvvaccine.org.au/ http://www.hpvregister.org.au/

Report 2:
A Comparison of Differences in Approach to School-based Cervical Cancer Education in Scotland and Japan

HPV vaccines are used in national immunization programmes globally. All evidence suggests that HPV vaccines are both safe and effective, safety concerns continue to appear in online/offline media. While the death of a British schoolgirl hours after HPV vaccination had no adverse effect on UK uptake rates (Figure 2.1), media reports of extensive pain following HPV vaccination in Japan have led uptake rates to plummet from >70%-1% (Figure 2.2). Using government data, we analyzed why these differences occurred based on education and government interventions.
Results

In Scotland, the national government is responsible for health and education and the HPV vaccination program had/has a high degree of political commitment. Before the programme commenced, special working groups were established that included communication and education and epidemiology and surveillance streams (Figs 2.3 and 2.4).

Members were communications experts, epidemiologists, and representatives from schools, general medical practice, and the national health telephone help-line. Qualitative and quantitative studies were performed to investigate pupil/parent/teacher attitudes towards HPV vaccination. Based on the results, school-based educational materials were developed and a homepage created where parents had access to all materials and a free helpline they could call with any concerns (Figure 2.5).

In Japan the vaccine was introduced without any forward planning or any system to evaluate the vaccination programme (Figures 2.6).

Educational materials in Japan were developed by advocacy groups or by the drug companies leading to suspicion and distrust of both vaccine efficacy and safety. Furthermore, there was no place for parents to discuss any concerns.

Conclusion: In Scotland, a structured, managed approach to HPV vaccination achieved high and inclusive uptake. Risk communication through robust offline and online publications helped parents...
make a confident well informed decision about vaccinating their daughter against HPV. In Japan, issues with risk communication and risk management, along with no government school-based educational programmes, combined with an unrestrained media environment and lack of reassurance and systematic addressing of events by the government led to mistrust in the vaccine and cessation of uptake, despite the vaccine still being free and in the NIP.

5. 主な発表論文等
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