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Implementing Smoking Prevention Education in Early Childhood: Views from Parents and Early Childhood Educators

Globally, approximately 6 million deaths per year can be attributed to smoking, with smoking causing a huge societal financial burden (Max, Sung, and Shi, 2014; World Health Organization [WHO], 2013). While smoking has remained an international health issue for decades, research has shown that smoking has gradually shifted to younger generations (Tingen et al., 2006). The World Health Organization (2013) reported that the global prevalence of smokers aged 15 and over is 22%. In Hong Kong, although the smoking prevalence has recently slightly dropped, the number of daily smokers has remained high; with two-thirds of such daily smokers having started smoking cigarettes at an age between 10 and 19 (The Hong Kong Census and Statistics Department, 2011).

Call for implementing smoking prevention programme on young children

Adolescents tend to underestimate addiction (Wang, Henley, and Donovan, 2004) and exhibit a low success rate in quitting smoking (Abrantes et al., 2009). Recent research has demonstrated that 80% of adolescents and young adult smokers continued to smoke after participating in smoking cessation programmes after a two-year follow-up period (Walker and Loprinzi, 2014). Because adolescents are not totally receptive to anti-smoking messages and their smoking behaviours are likely to transfer into adulthood (Rogacheva et al., 2008), there has been call for an earlier commencement of primary prevention programmes in early childhood (Marck et al., 2014).

On one hand, there is convincing evidence that early interventions have generated significant beneficial outcomes, such as health and cognitive gains to young children (Nores and Barnett, 2010). Adults who attended preschools have demonstrated a reduced risk of smoking (D'Onise, Lynch, and McDermott, 2011). On the other hand, due to curiosity and a limited knowledge about smoking hazards, children are prone to initiate smoking and show progressive acceptance of social smoking (Woods, Springett, Porcellato, and Dugdill, 2005). Furthermore, the onset of initial smoking has been found to be associated with an earlier onset of psychopathology (Jamal, Does, Pennix, and Cuijpers, 2011).

Purpose of research

The purpose of research aimed to explore views from parents and early childhood educators, who are school stakeholders and children's significant others about implementing smoking prevention education in early childhood. The research questions were: (1) How do parents and early childhood educators perceive the necessity of implementing smoking prevention education in early childhood educational settings? and (2) What are the barriers to the implementation of this education programme as perceived by parents and educators?

Participants and Procedures

18 principals, teachers, and parents were invited from a stratified sample of 30 preschools

(randomly selected from a population of 960 pre-primary educational settings during 2014) to participate in three focus interview groups, including (1) the principal, (2) the teacher, and (3) the parent. Ethical approval was granted by the human research ethics committee from the Hong Kong Institute of Education and written consents were obtained from all participants. An interview guide was constructed to facilitate communication among participants and was presented to each participant at the beginning of the interview session. Sample guiding questions are shown in Table 1 [below].

After the interviews, the audio recordings were transcribed verbatim. The transcribed script was then analysed by the first and second author to generate initial themes. These themes were then passed to an independent third rater (the third author) for a final review and reach consensus among all the authors.

Results

Participants expressed common and different views on implementing smoking prevention education.

Common themes

All participants felt the necessity of implementing smoking prevention education in early years. Parents and early childhood educators worried about the severity of public smoking, especially smoking among secondary school students. Both parents and teachers had seen secondary students smoking publicly in shopping malls. They felt that smoking prevention education should be implemented at an earlier age to aid in the development of health attitudes against smoking. The principals expressed the view that public education against smoking was inadequate and that adolescents found access to cigarettes

despite the fact that selling cigarettes to any persons under 18 years of age is illegal.

Young children could be empowered to transmit anti-smoking messages. Educators indicated that young children could play the role of a change agent by transmitting messages about smoking hazards to influence the smoking behaviour of their caregivers. One principal stated, 'Let young children have a mission to communicate the adverse effects of smoking [to their caregivers].' Teachers felt that young children were effective in affecting the smoking behaviour of adults. Principals believed that smoking caregivers had higher tolerance when their young children confronted their smoking behaviour. Furthermore, young children were even role models for adult smokers to evaluate the impact of their smoking behaviours on others. Similarly, parents indicated that young children's voices have 'power' and are highly effective in communicating anti-smoking messages that can ultimately influence caregivers' smoking behaviour. Parents felt that young children tend to comply with teachers. One parent said, 'Children tend to remember what their teachers said in school but do not remember what their parents said.'

The curriculum should be age-appropriate. Early childhood educators expressed that the programme should send clear and age-appropriate messages about smoking hazards. Both teachers and principals indicated that the programme should send clear messages about the adverse effects of both first-hand and second-hand smoke. Teachers mentioned that the curriculum should be flexible to use to match the geographical [socio-economic] region of each school. In addition, educators voiced that such educational initiatives take time to work out and

Table 1. Sample Guiding Questions

Research questions	Sample guiding questions
1. How do parents and early childhood educators perceive the needs of implementing preventive smoking education in early childhood settings?	- Do you think adolescent smoking is getting worse, and if so, what role(s) can educators play in dealing with adolescent smoking? - Do you think it is necessary to implement smoking prevention education in early childhood, and if so, why? - In what ways is this education important to young children, parents, and schools?
2. What are the barriers that block the implementation?	- What do you think are the possible barriers of successful implementation? What are your suggestions in tackling those barriers?

suggested that specific programme evaluation methods should be included.

Specific themes

Barriers against implementation as perceived by parents

Children's cognitive limitation in understanding smoking behaviours from different perspectives. Parents indicated that young children are surrounded by conflicting messages about public smoking and that there are no clear examples that illustrate the adverse effects of smoking for children. One parent expressed, 'Mummy and teachers said smoking was wrong, then why there were so many people smoking on the street?' Another parent mentioned, 'Smoking behaviour is blurred [right or wrong] and does not have a clear-cut moral rule for children to follow.'

Teachers' readiness. Parents indicated that the role of the school is to give clear and unambiguous messages about smoking to young children so that children's curiosity about smoking can be minimized. However, parents also expressed that [preventive smoking education] can sabotage the parent-school relationship. One parent said, 'Children do what teachers say; conflicts arise when children confront their smoking parents with anti-smoking messages that they learned from their teachers.' They emphasized that teachers must be well prepared. One parent said, 'Teachers must be trained to implement this new curriculum and to demonstrate competence in teaching ambiguous concepts of smoking to young children.' Parents expressed that teachers must thoroughly familiarize themselves with the programme contents.

Perceived barriers against implementation by educators

Negative parental reactions. Principals commented that smoking is a multilevel behaviour that involves individuals' as well as others' rights. One principal mentioned, 'While environmental tobacco smoke is hazardous to others' health, we need to be careful with children's confrontation of adults' smoking behaviours.' Both principals and teachers were concerned about parents' reactions to this education programme. They expressed that some smoking parents may become uncooperative in collaborating with schools and difficult to handle. One principal said, 'Schools need to very

carefully consider teachers' guidelines for handling parents and teaching strategies.' Educators indicated that they would prefer handbooks to provide direct guidelines for handling smoking parents.

Parents' ignorance about the impacts of smoking. Both educators expressed that young children observe and model their caregivers' smoking behaviour. Parents have been seen smoking outside of schools while waiting for their children. Young children were observed making paper cigarettes and modelling adults' smoking gestures during playtime. Furthermore, children with tobacco odour on their school bags were observed to be physically thinner than those children without the odour.

Low self-efficacy of teachers. Teachers do not feel comfortable teaching young children about smoking prevention. One teacher said, 'I felt that it is difficult to teach this topic [smoking prevention] because children have not had the actual experience [smoking].' Teachers also expressed the undesired effects from this education. Educators worried that children may become more curious toward smoking after teaching. One teacher mentioned, 'Children can be negativistic; the challenge is how to give a clear and straight-forward message [about smoking hazards] to children.'

Discussion

The current findings indicated that parents and early childhood educators felt that there was a necessity of implementing smoking prevention education. Moreover, they all demanded that an age-appropriate design of such an education programme would work best for the development of young children's health attitudes and behaviours (National Association for the Education of Young Children [NAEYC], 2013).

Notably, parents and educators both perceived that young children are 'powerful' figures to transmit anti-smoking messages. Given that existing anti-smoking media campaigns need to use novel information to attract smokers' attention to health messages (Swayampakala et al., 2015), the current findings recommend that young children could be empowered (Gordon, Mackay, and Rehfuess, 2004) to play a role as a change-agent to transmit anti-smoking messages and influence adults' smoking behaviour. Indeed, sociologists have supported the contribution of

children as active social agents in the society (Milton, 2002). Schools and policy makers may consider adopting young children's 'soft power' as an additional arm to existing anti-smoking media campaign strategies.

With the acknowledgement of educators and parents, school managers and policy makers have strong support to plan and implement smoking prevention education programmes to build up children's health attitudes against smoking in early childhood education settings. A spiral curriculum comprising age-appropriate content is feasible to reflect a multilevel understanding of smoking behaviour in a progressive manner. Young children will be able to accumulate knowledge about smoking hazards and addiction within their early education. In addition, the curriculum may be tailored to encourage young children to be ambassadors who transmit anti-smoking messages to their families.

Although all stakeholders indicated that early education is essential to help build the foundation for health knowledge and attitudes against smoking for young children, they perceived several barriers to the implementation. The first barrier is that smoking behaviour is ambiguous to give a clear cut verdict on its morality. Principals expressed that smoking behaviour is multilevel, involving the issues of an individual's right to smoke and others' right of not inhaling second-hand smoke. The implication is that a multilevel perspective on smoking behaviour is an essential concept to be disseminated in smoking preventive education to give young children and parents a complete understanding of smoking behaviour to reduce the tension between smoking parents and schools. This finding informs early childhood educators and policy makers on an important consideration to enhance the effectiveness of the programme.

Second, while parents expressed concerns about teachers' readiness to address some grey areas about smoking and smoking parents' resistant attitudes, teachers felt incompetent in implementing this education programme because effectively teaching children the multilevel concept of smoking behaviour is challenging. Previous research has shown that early childhood teachers prefer following clear and straightforward instructions with fewer uncertainties (Wong and Zhang, 2013). The lack

of clear instructions is likely to induce hesitancy in teachers, and eventually reduce teaching effectiveness. To empower teachers, teacher training programmes and programme manuals with clear and detailed teacher guidelines can be provided to reduce teachers' worries prior to the commencement of the education programme. For example, training in the aspects of managing difficult parents and updated knowledge about smoking behaviour are warranted.

The third barrier is that smoking parents are not fully aware of the impact of smoking on their young children and become defensive upon confrontation. Research has shown that children are at risk of inhaling second-hand smoke at home and that such exposure to cigarette smoke has been found to be associated with numerous physical and mental disorders (Max et al., 2014; Bandiera et al., 2011). Children from homes of smoking parents have a higher likelihood of initiating smoking (Tingen et al., 2006). Although the current findings indicate that educators believed that parents' ignorance about smoking hazards, they voiced that parents are key partners to work together to reduce second-hand smoke. The current findings unanimously support parental involvement in this education programme, which match the previous finding that smoking parents are crucial figures to be involved in smoking prevention education (Max et al., 2014; Jurado, Muñoz, Luna, and Fernández-Crehuet, 2004; Loke and Wong, 2010).

Conclusion and Limitation

Parents and early childhood educators indicated that an age-appropriate smoking prevention education was appropriate to be implemented in early childhood. Early childhood educators and policy makers may consider promoting the readiness of both parents and teachers by providing educational programmes and training. One limitation of this research was the small sample size and thus future quantitative research may be needed to strengthen the present findings. Another limitation was the ethnic background of the sample.

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