

**A STRATEGY TO IMPROVE SCHOOL
BASED HEALTH PROMOTION:
A CASE STUDY IN SMOKING PREVENTION**

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**A thesis submitted for the degree of Doctor of Philosophy
Faculty of Medicine and Health Sciences
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AUGUST 1998**

I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree to any other University or Institution.

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ACKNOWLEDGEMENTS

Firstly, I would like to thank Professor Richard Heller for allowing me the opportunity to undertake this PhD at the Centre for Clinical Epidemiology and Biostatistics. His optimistic outlook and faith in my ability was a constant encouragement for which I am grateful. I would like to acknowledge the Commonwealth Government which provided an Australian Postgraduate Award for the duration of this research.

Dr Natalie Johnson provided valuable advice and contributed a great deal during all stages of the research reported here – thank you Nat for your friendship and support. I am grateful to Dr Kate D’Este for statistical advice, moral support and for providing perspective when I was without any. Special thanks to my friend and mentor Phil Williams for all of the opportunities he has provided me.

I am grateful to all the students and teachers who participated in the research reported here. I would also like to acknowledge and thank Jennie Bell, Lynn Wales, Meredith Tavener, Dr Carla Treloar, Marie Williams, Kim Roderick, Aileen Rowley, Janine Duke and Patrick Kelly – all of whom contributed in many different ways. Special thanks to my sister Karie and my Auntie Lyn who were a great source of encouragement and perspective.

There are no words that can adequately thank you Kristian. Without your support and sense of humour, the last three years would have been so much more difficult.

Finally, to my parents Di and Bryce James: your commitment and integrity are an inspiration to me. I dedicate this thesis to you both.

“What is very clear is that education and health for children are inextricably intertwined. A student who is not healthy, who suffers from an undetected vision or hearing defect, or who is hungry, or who is impaired by drugs or alcohol, is not a student who will profit from the educational process. Likewise, an individual who has not been provided assistance in the shaping of healthy attitudes, beliefs, and habits early in life, will be more likely to suffer the consequences of reduced productivity in later years.”

McGinnis (1981)

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LIST OF ABBREVIATIONS

Abbreviations used throughout this thesis include the following

ABS	Australian Bureau of Statistics
ACHPER	Australain Council for Health, Physical Activity and Recreation
AEC	Australain Educational Council
AGPS	Australian Government printing service
AIHW	Australain Institute of Health and Wefare
CDC	Centre for Disease Control
CHHSP	Coalfields Health Heartbeat Schools Project
CO	Carbon Monoxide
DCSH	Department of Community Services and Health
DSC	Disadvantaged School Component (of the Equity Unit)
DSE	Department of School Education
HIPS	Health in Primary Schools
HPS	Health promoting school
KLA	Key Learning Area
NCI	National Cancer Institute
NHF	National Heart Foundation
NHMRC	National Health and Medical Research Council
NIH	National Institute of Health
NNESP	National Nutrition Education in Schools Project
PDHPE	Personal Development, Health and Physical Education
PHC	Primary Health Care
RFA	Risk-focussed approach
SCN	Thiocyanate
SWSAHS	South West Sydney Area Health Service
UNICEF	United Nations Children's Fund
USDHHS	United States Department of Health and Human Services
USEPA	United States Environment Protection Authority
USOTA	United States Office of Technology Assessment
WASH	Western Australia School Health
WHO	World Health Organisation

SYNOPSIS

Background

Schools have enormous potential as a setting for health promotion. Children spend the majority of their day at school, and schools have an existing infrastructure to provide health education in an acceptable manner. Links with parents and care givers provide schools with the potential to improve the health status of many members of the community. However, time limitations, lack of teacher training and competing agendas, mean that many schools are not providing health promotion programs and supportive environments. The aim of this thesis is to develop a strategy to improve school based health promotion. The strategy is based on a risk-focussed approach (RFA) and the Health Promoting School (HPS) framework. To demonstrate implementation of the proposed model, smoking prevention is used as a case study.

Theoretical Framework

A RFA is one which acknowledges that all members of a target group are not identical, and tailors the health promotion intervention to different risk factors or predictors. In the case of smoking prevention, all children do not possess all of the risk factors for smoking uptake, so the risk-focussed intervention was tailored according to gender and stage of smoking uptake. The use of this approach reduces the amount of time that needs to be spent on health education, thus overcoming one of the major barriers to school based health promotion.

The HPS framework is made up of three main areas: the formal curriculum; school ethos, and; home/school/community partnerships. A health promoting school is one which displays, in everything it says and does, support for and commitment

to, enhancing the total well-being of all the members of the school community. This approach extends health promotion from simply health education which is confined to the classroom, to include healthy policies, supportive environments, positive role models and health promotion links with the community. The HPS framework also reduces situations of hypocrisy such as classroom lessons on nutrition and a school canteen which only sells junk food. The HPS framework was incorporated into the risk-focussed intervention.

Studies

A longitudinal study was conducted to determine the predictors of smoking uptake among grade six children (n=459). Baseline assessment of a range of predictors was carried out using a questionnaire administered under bogus pipeline conditions and follow-up data collection was completed six months later. Smoking status was assessed by a stage-of-change item which assessed stage of smoking uptake. The predictors of uptake that were identified are outlined below.

- i) all children were more likely to try smoking if their best friend was experimenting with cigarettes or if they identified that they would like to try smoking. Boys were more likely than girls to try smoking during grade six
- ii) girls were more likely to try smoking if they did not believe that smoking was addictive or that smoking had negative health consequences
- iii) boys were more likely to smoke if they didn't think they would get caught
- iv) children who had never tried smoking were more likely to try it if their parents smoked or if they indicated intention to smoke
- v) children who were experimenting with cigarettes were more likely to progress to regular smoking if they thought that they would not get into trouble if

they were caught smoking and that there was little chance they would get caught

The predictors of cigarette smoking uptake were used to design lessons for a risk-focussed intervention. The risk-focussed intervention also included strategies to engage the school community such as policy examination and promotion, fostering a non-smoking environment, the inclusion of parents and the use of interactive learning techniques.

An instrument to assess HPS status was designed and the content validity established using expert review. This instrument was then used in a cross-sectional survey of 172 primary school principals from the Hunter Region.

A sampling frame was established for a randomised controlled trial in which the randomisation was stratified according to school size and HPS status. Thirty-five Hunter Region primary schools and 1307 students took part in the randomised controlled trial. The randomised controlled trial assessed differences in smoking uptake between four different groups:

1. Normal practice
2. Standard classroom intervention
3. Risk-focussed intervention taught by regular classroom teacher
4. Risk-focussed intervention taught by a specialist health teacher

The results of this randomised controlled trial showed a statistically significant difference in smoking uptake between students from different study groups. Twenty-eight per cent of students in group 1 and 32% of students in group 2 took up smoking. However, only 9% of children in group 3 and 3% of children in group

4 took up smoking ($p < 0.01$). The odds ratio for taking up smoking in group 1 compared to group 4 was 15.1.

The innovative risk-focussed model was successful in reducing experimentation with cigarettes which is recognised as a notoriously difficult area to produce change. It is recommended that the risk-focussed model be trialed on other health behaviours such as physical activity, nutrition, sun-safe behaviour and injury prevention.