Youth2000 Survey Series

The Health and Wellbeing of New Zealand Secondary School Students in 2012

Health Services in New Zealand Secondary Schools and the Associated Health Outcomes for Students

2014

Adolescent Health Research Group

THE UNIVERSITY OF AUCKLAND
FACULTY OF MEDICAL AND HEALTH SCIENCES

Title: Health Services in New Zealand Secondary Schools and the Associated Health Outcomes for Students

ISBN 978-0-908689-85-9 (paperback)

ISBN 978-0-908689-86-6 (electronic)

To be referenced as:
Denny S., Grant S., Galbreath R., Clark, T.C., Fleming, T., Bullen, P., Dyson, B., Crengle, S., Fortune, S., Peiris-John, R., Utter, J., Robinson, E., Rossen, F., Sheridan, J., Teevale, T. (2014). *Health Services in New Zealand Secondary Schools and the Associated Health Outcomes for Students.* Auckland, New Zealand: University of Auckland.

The Adolescent Health Research Group (AHRG) investigators on the Youth'12 project are:
Terryann Clark (Principal Investigator), School of Nursing

Theresa (Terry) Fleming, Department of Paediatrics: Child and Youth Health, and Department of Psychological Medicine

Pat Bullen and Ben Dyson, Faculty of Education

Sue Crengle, Te Kupenga Hauora Māori, School of Population Health

Simon Denny, Department of Paediatrics: Child and Youth Health

Sarah Fortune, Department of Psychological Medicine

Roshini Peiris-John and Jennifer Utter, Section of Epidemiology & Biostatistics

Elizabeth Robinson, Auckland UniServices Limited

Fiona Rossen, Social and Community Health

Janie Sheridan, School of Pharmacy and Centre for Addiction Research

Tasileta Teevale, Pacific Health, School of Population Health

Acknowledgements
We would like to thank the students, school staff, and school health professionals who participated in the Youth'12 and school health services surveys. Without your patience and help this project would not have been possible. We would also like to acknowledge the Youth'12 project manager, Sarah Masson, and administrator, Toni Jardine, and the research teams who implemented the Youth'12 survey in participating schools. We are also grateful to Val Grey for her help in preparing this report.

The Youth'12 project was funded by the Ministries of Youth Development, Social Development, Health, Education and Justice, the Department of Labour, the Families Commission and the Alcohol Advisory Council of New Zealand. We would also like to acknowledge the support of Toshiba (Australia) Pty. Limited. The School Health Services project was funded by the Ministry of Health.

Contact details
Associate Professor Simon Denny
Adolescent Health Research Group
Department of Paediatrics: Child and Youth Health
Tamaki Innovation Campus
The University of Auckland
Private Bag 92019
Auckland, 1142
New Zealand

Phone: +64 9 923 9400
Email: s.denny @auckland.ac.nz

Further publications by the AHRG are available at www.youthresearch.auckland.ac.nz

Youth2000 Survey Series

Health Services in New Zealand Secondary Schools and the Associated Health Outcomes for Students

S. Denny, S. Grant, R. Galbreath

and the Adolescent Health Research Group:
T.C. Clark (Principal Investigator) T. Fleming, P. Bullen,
B. Dyson, S. Crengle, S. Fortune, R. Peiris-John,
J. Utter, E. Robinson, F. Rossen, J. Sheridan, T. Teevale

Adolescent Health Research Group
Faculty of Medical and Health Sciences
University of Auckland

Auckland

2014

Executive Summary

In the past decade there has been renewed interest in health services in schools, in part driven by poor youth health statistics showing needs that were not being met by existing primary care services. From 2008 funding has been provided for school nurses or school-based health services in the secondary schools attended by young people of highest need: decile 1 and 2 secondary schools, teen parent units and alternative education facilities. From 2013 this was extended to decile 3 schools, under the Prime Minister's youth mental health initiative. As part of that project the Ministry of Health commissioned this report to examine the current state of health services in secondary schools in New Zealand and the possible impact they have on student health and wellbeing outcomes.

Following Youth'12, our survey of 8500 students in a random sample of 125 secondary schools, we surveyed the health services in the same schools. The results reveal considerable variability in the provision of health services in schools. A significant proportion (12%) of secondary schools report no health services beyond the minimum requirement of first aid provision; this was more common among private schools than integrated or state-funded schools. The other 88% of schools report some level of health service. The most common model of health service provision, in 56% of schools, was by visiting health professionals. Other schools had on-site health professionals: 20% had a health professional (a school nurse) and 12% had a collaborative health team of health and other professionals on site for most of the week.

Schools with higher levels of health service (an on-site school nurse or health team) were more likely to have more facilities, to be better integrated with the school, the community and local Primary Health Organisations, and to provide routine comprehensive health assessments (including HEEADSSS screening[1]) and more comprehensive health services.

Registered nurses were the most common health professionals working in schools, with slightly more public health nurses (who visit schools) than primary care nurses (who are based at schools). There were a small number of doctors (5% of the health professionals). Most health professionals working in schools have some level of training in youth health, mostly from one-off study days or lectures. The primary care nurses working in schools were more likely than the visiting public health nurses or doctors to have completed postgraduate papers in youth health.

Analysis of survey data on the health and wellbeing of students at schools with and without school health services gives some evidence of the effectiveness of those services, although such survey results do not allow any unequivocal finding in this regard. The most notable results were in the mental health domain: **there was less depression and suicide risk among the students in schools that had higher levels of health services.** Looking more closely at the specific qualities of the school health services that were particularly associated with improved mental health outcomes among the students, there was significantly less depression and suicide risk where the school health services had health professionals on site; where the hours of health professional time per week per 100 students was higher; where the health professionals were trained in youth health and well supported through professional peer review; and where the health professionals were well integrated with the school and with the local community. There was also some evidence of effectiveness of school health services in the domain of sexual and reproductive health: there was better contraceptive use by female students in schools that provided sexual health services and where the health professionals had received training in youth health.

1 HEEADSSS is a psycho-social risk assessment tool designed to increase engagement and identify adolescent health concerns

Nurses and doctors working in schools need sufficient time in order to work effectively in the school setting. Schools with visiting health professionals reported the lowest hours per week per 100 students: on average less than 1 hour of nursing time per week per 100 students and less than 0.05 hours of doctor time per week per 100 students. By contrast, schools with an on-site health team reported on average 4.8 hours of nursing time per week per 100 students and 0.18 hours of doctor time per week per 100 students.

One important finding for local District Health Boards was that **there was less hospital A & E use reported by students in schools with health services,** especially where the health services had sufficient nursing time (over 2.5 hours per week per 100 students), and performed routine HEEADSSS assessments. There was also better school engagement among students in schools with a health team on site, with sufficient nursing time, and that performed routine HEEADSSS assessments.

Overall these results suggest that high quality school health services (those that have on-site staff well trained in youth health, with sufficient time to work with students and to perform tasks like routine HEEADSSS assessments) do impact positively on student health and wellbeing outcomes in areas such as depression, suicide risk, sexual health, alcohol misuse and school engagement. There is also evidence that high quality school health services lessen the use of hospital A & E by students. However, full school health services are not available in all secondary schools. Further investment and resourcing of school health services could have a positive impact on the health and wellbeing of secondary school students in New Zealand.

Contents

Introduction

The development of school health services in New Zealand

School health services in New Zealand have a long history. In 1912 the Department of Education appointed four doctors as Medical Inspectors of Schools to make inspections of school children's health. In 1917 seven nurses were added to provide follow-up and a link between home and school. This grew into a School Health Service, which transferred to the Department of Health in 1921, and then in 1930 became part of the District Health Nursing Service. After further developments, in 1953 the school nursing function became part of the Public Health Nursing Service.

After the "Tomorrow's Schools" education reforms of 1989, under which each school became governed by a local board of trustees, many new initiatives, including school-based nursing or health services, were established locally in individual schools. Public health nurses continued to be available to schools, but this was only part of their role in the wider community.

These developments in health services in schools were then accelerated by changes in the way wider health services were delivered. The New Zealand Public Health and Disability Act 2000 promoted population health approaches and an increased emphasis on primary health care. Under the New Zealand Health Strategy (2000) and the Primary Health Care Strategy (2001), primary health care nursing was to be delivered in a variety of settings, including schools. This led to a number of initiatives which expanded health services in schools.

Funding was directed particularly to initiatives to reduce barriers and inequalities among those populations known to have the worst health status. An existing AIMHI (Achievement In Multicultural High Schools Initiative) of the Ministry of Education received additional funding for the development of 'full service facilities', including health services, on site at nine low-decile secondary schools. Many District Health Boards funded school health services either via the new Primary Health Organisations, or through other channels.

In 2008 a larger government initiative was announced to provide school nurses or school-based health services in all lower decile secondary schools nationally. It was phased in over the next few years beginning with decile 1 and 2 secondary schools, teen parent units and alternative education facilities. In April 2012 it was announced that this would be extended to decile 3 schools as part of the Prime Minister's Youth Mental Health Project.

With this history of many strands of development, with rapid change still ongoing, and with the broad measure of local control of schools, a high degree of variability can be expected in the scope and organisation of health services in schools. This report provides a picture of the situation current in 2012.

Evidence of the effectiveness of school health services

School-based health services (SBHS) have the potential to impact on the health of secondary schools students by providing accessible, comprehensive and intensive health services. However, currently only limited evidence is available on the effectiveness of SBHS in improving student health outcomes. Research looking at the effectiveness of school-based health services would ideally randomise the provision or withholding of school-based health services to schools and follow the health outcomes among their students. Given the practical and ethical difficulties there have been no studies employing such designs; instead research has sampled existing schools with and without health services and compared the health outcomes of students from these schools. For example, Kisker and Brown (1996) suggested that students in schools with health centers had greater access to health care compared with a national sample of students without access to SBHS, but found few differences in health risk behaviors, mental health, or pregnancy rates. Another study of African American adolescents from 7 Midwestern US high schools found that students in schools with SBHS were less likely to smoke cigarettes and marijuana than students in schools without SBHS, but there were few differences in other areas they examined, such as alcohol use (Robinson et al. 2003).

Kirby et al. (1991) compared sexual and reproductive health outcomes among students at 4 schools with SBHS and 4 paired schools without SBHS, and also at 2 schools before and after the establishment of school clinics. They found some evidence of improved contraceptive and condom use in schools with SBHS, but no consistent effects on self-reported pregnancy rates. A study of 12 urban California high schools, 6 with and 6 without SBHS, found higher rates of contraception use in schools with SBHS, but only among female students (Ethier et al. 2011). A study from New Zealand using data from the Youth'07 national survey of secondary school students found that there were fewer pregnancies among students at schools with health services, but only when they provided sufficient doctor and nursing time (Denny et al. 2012).

To obtain any evidence of the effectiveness of school health services requires comparing outcomes among students across a large number of schools with and without school health services. Furthermore, studies need to allow for the differences among students in characteristics which are known to be associated with better or poorer health outcomes. Given the policies that specifically target school health services to schools with students of high need (and poorer health outcomes), comparisons need to be made with care to avoid confounding effects.

The present project collected data from 90 schools with varying levels of school health services, and also utilised health and wellbeing data from over 8,000 students from the same schools. The two sets of data were analysed to find any associations – to find whether the students at schools with health services have better health and wellbeing outcomes than the students at schools without health services, other factors being equal. While any association cannot be assumed to be causal – it does not necessarily mean that the improved health outcome is the result of the health service - it does provide some evidence of the effectiveness of health services in New Zealand's secondary schools.

Methodology

The school health services survey collected information from the schools participating in Youth'12, the latest in a series of national youth health surveys in New Zealand secondary schools (Clark et al. 2013). Youth'12 utilised a two-stage cluster design to obtain a nationally representative sample of New Zealand secondary school students. For the present project, data on school health services in the schools participating in Youth'12 were collected not only to give an up-to-date picture of the health services in New Zealand secondary schools, but also by analysing the Youth'12 student data from the same sample of schools, to assess associations between school health services and student health and wellbeing outcomes.

The sample of schools for the Youth'12 survey and thus also for the present project was drawn from a list of all composite and secondary schools in New Zealand, obtained from the Ministry of Education in 2011. There were a total of 493 schools with students of Year 9 or above. From these, 125 schools were randomly selected and invited to participate in Youth'12; 91 (73%) agreed to take part. In those with more than 150 students in Years 9 to 13, 20% of their students were randomly selected from the school roll and invited to participate. In the 13 schools with 150 or fewer students in Years 9 to 13, 30 of their students were randomly selected and invited to participate. This was to avoid the possibility of identification of individual students when reporting results back to these smaller schools. In total, 12,503 students were randomly selected and invited to participate, of which 8,500 took part in the survey (a 68% response rate). Apart from a slightly higher proportion of female students (54%), the participating students were similar demographically to the national population of high school students in New Zealand.

Written consent was obtained from the principal of each participating school. The selected students and their parents were given written information about the survey, and each student gave their own consent to participate. The Youth'12 student survey was carried out from March through to November 2012 and was administered using internet tablets with headphones so that the students could hear the questions read out as well as reading them from the tablet screen. No keyboard data entry was required; responses to questions were made by touching the appropriate answer on the screen. Students could skip any question or section of the survey at any point. Trained study personnel administered the survey in all participating schools.

For the health services survey, all schools that had taken part in Youth'12 were invited to participate in this further survey after the student survey had been conducted in 2012. Of the 91 schools that participated in Youth'12, 1 school had subsequently closed but all the remaining 90 schools agreed to take part in the health services survey. A letter was sent to all principals asking for their consent to take part and who to contact in their school regarding school health services. These people were then contacted by phone and asked to fill in an on-line survey on the health services in their school. They were also asked to provide contact information for all health professionals working in the school. These people were then contacted and asked to complete an on-line survey on their work in the school.

Responses were collated and where there was missing information on hours of nursing or doctor time in schools, clinic leaders were contacted for clarification. Of the 90 schools, 11 (12%) reported first-aid health services only or no health services. The remaining schools (n = 79) provided information on the health services at their school.

Altogether, 129 health professionals were identified as working in one of the participating schools. Of these, 113 completed the health staff survey (a response rate of 88%).

Measures

The survey results were collated to obtain various measures of the school health services. These variables are set out on page 10 with the questionnaire responses they are based on. The main source of information was from the school health clinic leader who completed an on-line questionnaire on the health services in their school, including the facilities, staffing levels, whether comprehensive physical and psycho-social health assessments of students were done, and the level of support from, and integration with the wider school and community (see Appendix One).

Health staff working in each school also completed an on-line questionnaire on the hours they worked in the school, their professional background and level of training, and the peer support and professional development they received. The health staff questionnaire also enquired about the availability of specialist support and the sexual health services they provided (see Appendix Two). For schools where there was more than one health professional working in the school, the health professional working the most time there was used to define the level of training and the sexual health services provided in that school.

Table 1: Definition of variables used to describe school health services

Variable	Source: survey question and applicable answer categories
Level of health services in schools	Which of the following best describes the level of service your school health service provides? First aid and urgent health care Regular health clinics from visiting health professionals Approximately one health professional on site for most of the week A health team on site for most of the school week
Infrastructure	
Number of facilities (total, not including a sick bay)	What facilities does your school service have? (You can tick as many as apply) A private dedicated health clinic for a school nurse Nurse rooms (separate from sick bay) Rooms for others e.g. social worker Toilet facilities for students within the health clinic Computers for health clinic staff A designated waiting area Reception A sick bay Other (please specify)
Hours of nursing time per week per 100 students	How many hours per week do you usually work at this school? Total student roll (Ministry of Education) Level of nursing: none, 0 to 2.5 hours per week per 100 students, 2.5 to 5 hours per week per 100 students, more than 5 hours per week per 100 students
Hours of GP time per week per 100 students	How many hours per week do you usually work at this school? Total student roll (Ministry of Education)
HEEADSSS screening (yes/no) (yes = yes to both questions)	Does the health service at your school undertake routine comprehensive (physical and psycho-social) health assessments of students? yes/no Does this include a HEEADSSS assessment? yes/no
Sexual health services (yes/no) (yes = any level of sexual health services provided)	What sexual health services do you provide at this school? (You can tick as many as apply) None Pregnancy testing STI screening Counselling and referral Condoms Emergency contraception Oral contraceptives Depo provera injections Other contraception Safe sex counselling Other (please specify)
Training and peer review	
Youth health training (none/ informal or study days/ postgraduate papers)	What training/ professional development in youth health have you had? (You can tick as many as apply) None I have received informal teaching I have attended one-off lectures, or workshops or presentations on youth health I have attended full study days on youth health (e.g. HEEADSSS study days) I have completed some postgraduate papers in youth health I have completed some postgraduate papers in child and youth health I have a postgraduate certificate in youth health I have a postgraduate diploma in youth health I have completed postgraduate papers in child and youth health (e.g. AUT, Auckland University, EIT, Massey University) I have completed other papers or degrees (e.g. mental health, alcohol and drug issues, talking therapies etc). Please specify:

Sexual health training (yes/no) (yes = any sexual health/ FPA training)	I have a certificate in contraception and sexual health (Family Planning) I have completed other Family Planning training
Peer review (yes/no) (yes = any peer review)	Are you (or any of your health team) part of a peer review group in your school? No, not at this school Yes, in a group with other colleagues from this school Yes, in a group with other colleagues from outside this school Yes, in a group with colleagues from both within and outside this school
Collaboration and support	
Regular meetings with school (yes/no)	Does the school nurse or anyone from the school health services attend any regular meetings with school staff to discuss issues and concerns about individual students, such as pastoral care meetings? yes/no
Works collaboratively with pastoral care team (yes/no) (yes = yes or somewhat)	Does the pastoral care team work collaboratively with the school health services personnel? Yes – we have a very good working relationship Somewhat – there have been difficulties No – not at all, there is no collaboration
Relationship with local GP/ PHO (yes/no)	Does your school health service have a relationship with a local primary care provider (e.g. local GP, hospital, Independent Nurse Practitioner)? yes/no
Relationship with local pharmacy (yes/no)	Does your school health service have a relationship with a local pharmacy? yes/no
Specialist support Mental health concerns Drug and alcohol problems Sexual health (mean of availability and helpfulness scales)	How available is specialist support when you need to refer or talk about a student in this school with one of the following areas of concern? 1 = Not available, 2 = Somewhat available, 3 = Very available, 4 = Extremely available How helpful is the specialist support? (If specialist support is not available tick N/A) 1 = Not at all helpful, 2= Not very helpful, 3 = Somewhat helpful, 4 = Very helpful, 0= N/A
Health service well integrated with the rest of the school (yes/no) (yes = moderate or a lot)	How integrated is the school health service with the rest of the school? Not at all – the health services work in isolation from the rest of the school A little – health personnel are known within the school A moderate amount – health personnel are part of the school A lot – health services and the health personnel are fully integrated with the wider school community
Health service well integrated with wider local community (yes/no) (yes = moderate or a lot)	How integrated is the school health service with the wider local community? Not at all – school health staff don't connect with other health services in the local community A little – school health staff connect with other health services in the local community A moderate amount – school health staff connect with health and other social services in the local community A lot – school health staff are fully integrated with a wide range of health, social, justice, sporting, youth and cultural groups/agencies in the local community

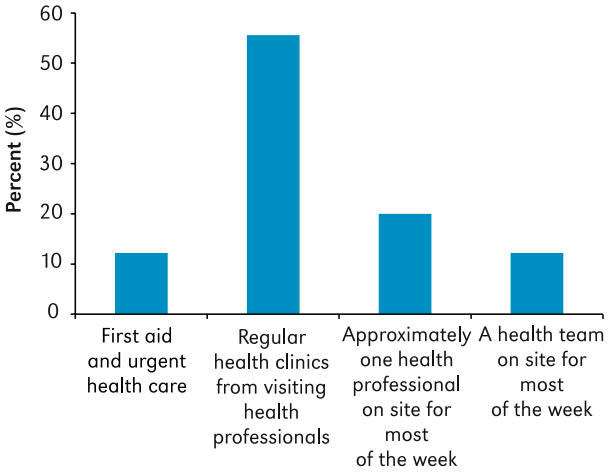
Results

Section one: Description of school health services in New Zealand secondary schools in 2012

Level of health services in schools

Of the 90 schools surveyed, 79 (88%) report that they have some level of health services from either visiting health professionals (n=50, 56%), an on-site health professional (n=18, 20%), or an established on-site health team (n=11, 12%). Eleven schools (12%) report only first-aid health services or no health services.

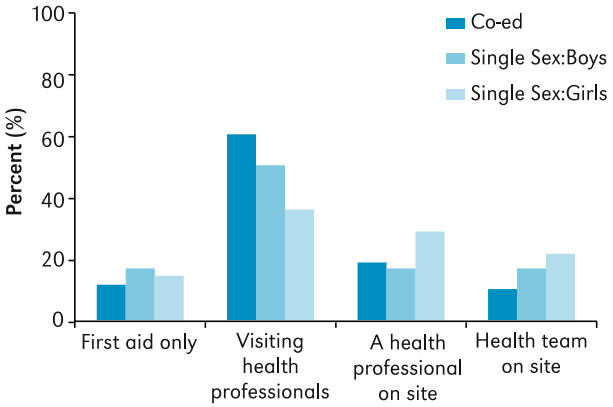
Figure 1: Types of health services (N = 90)



Level of health services in different types of schools

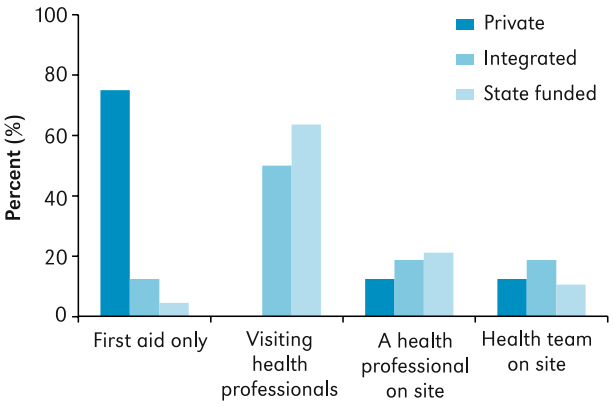
Girls' schools were more likely to have higher levels of school health services than boys' schools or co-educational schools.

Figure 2:
Level of health service by school composition (N=90)



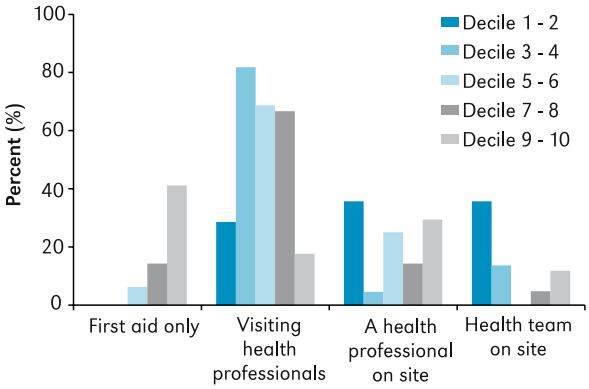
Private schools were more likely to have lower levels of school health services than state-funded schools or integrated schools. Three-quarters (75%) of private schools had first-aid services only and none reported having any visiting health professionals.

Figure 3:
Level of health service by funding of school (N=90)



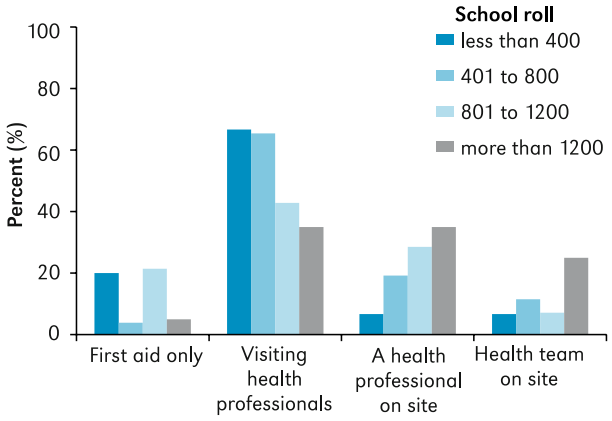
In 2012 there was funding specifically for health services in decile 1 and 2 schools, and the survey results confirm that all decile 1 and 2 schools had some level of health services beyond the basic first aid provision. At the other end of the scale, higher decile schools were more likely to have only first aid services and less likely to have visiting health professionals than lower decile schools.

Figure 4:
Level of health service by school decile (N=90)



Larger schools were more likely to have higher levels of school health services than smaller schools.

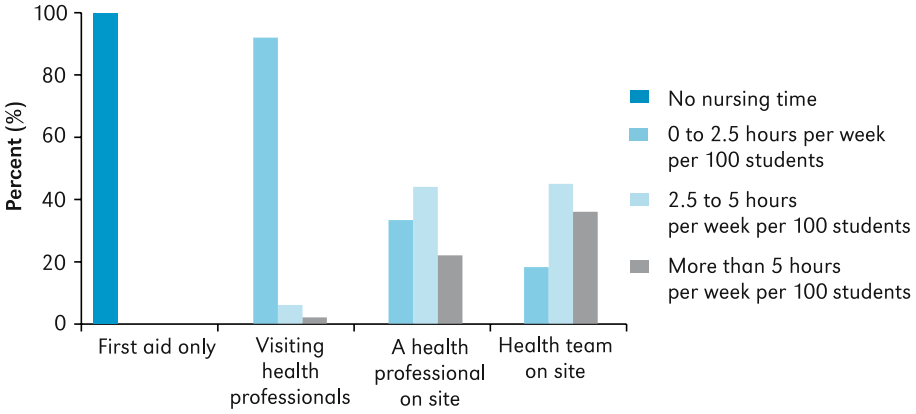
Figure 5:
Level of health services by school size (N=90)



Hours of nursing and doctor time in schools

Overall 12% (n=11) of schools (those with first aid service only) had no nursing time, 60% (n=54) had low levels of nursing time (0 to 2.5 hours per week per 100 students), 18% (n=16) had 2.5 hours to 5 hours of nursing time per week per 100 students, and 10% (n=9) had more than 5 hours of nursing time per week per 100 students.

Figure 6:
Hours of nursing time by level of health service



Overall the average hours of nursing time in schools was 1.9 hours per week per 100 students (range 0 to 14.9) and the average hours of doctor time in schools was 0.06 hours per week per 100 students (range 0 to 1.0). Schools with health teams on site had the highest average hours of nursing time (4.8 hours per week per 100 students) and doctor time (0.18 hours per week per 100 students). Schools with an on-site health professional had an average of 4.2 hours of nursing time per week per 100 students and 0.07 hours of doctor time per week per 100 students. Schools with visiting health professionals had low levels of nursing and doctor time (0.8 and 0.04 hours per week per 100 students, respectively).

In terms of doctor time, 85% (n=77) of schools had no doctor time, 9% (n=8) had between 0 and 0.4 hours of doctor time per 100 students, and 6% (n=5) had more than 0.4 hours of doctor time per 100 students.

Facilities

As might be expected, school health service facilities were related to the level of health service provision within each school. More basic facilities, such as a sick bay, were more common in schools with low levels of health service, while schools with on-site health staff were more likely to provide facilities such as dedicated clinic rooms, computers for staff and toilet facilities for students.

Figure 7: Prevalence of health service facilities (N = 90)

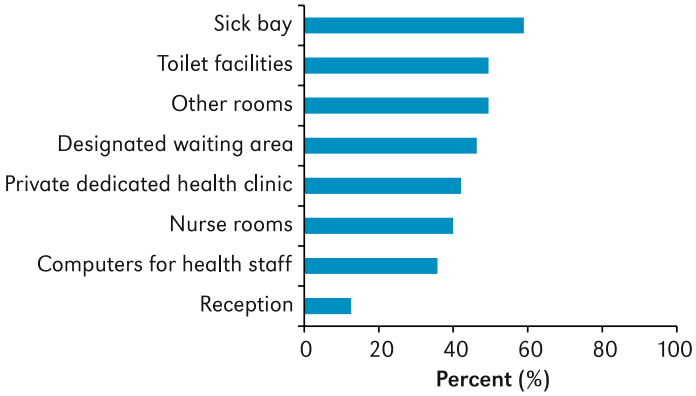
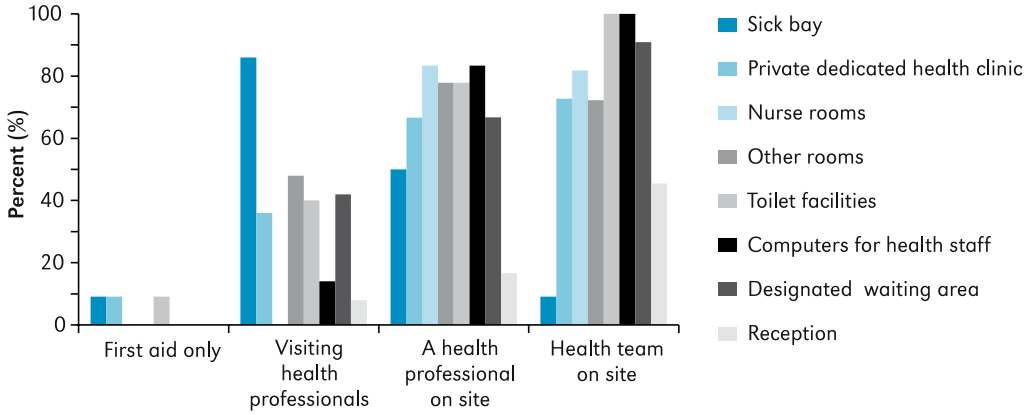


Figure 8: Health clinic facilities available in secondary schools by level of health service (N=90)

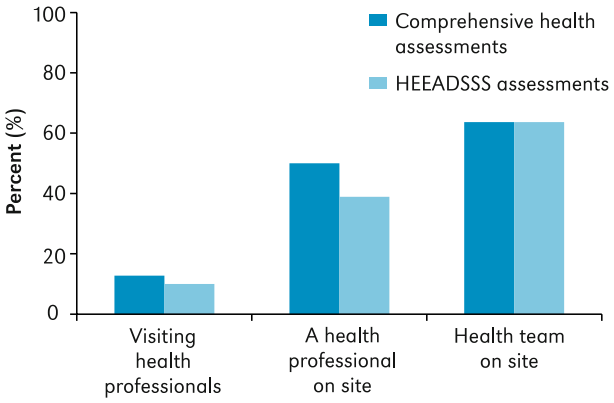


Comments from the health staff surveyed indicated the importance of privacy in health clinic facilities. As one commented, her clinic was not well supported by the students, probably because "the sick bay/clinic room is directly opposite the school reception area – not very private." Students could not approach her without the whole school knowing about it.

Routine health assessment and psycho-social HEEADSSS assessments

Twenty-two schools (25%) reported undertaking routine comprehensive health assessments. Nineteen schools (21%) indicated they perform routine HEEADSSS assessments, most commonly for year 9 students. This was more common among schools with higher levels of health services: 64% of schools with a health team on site conducted routine comprehensive health assessments, compared to 13% of schools with visiting health professionals. None of the schools with first-aid facilities only undertook routine health screening.

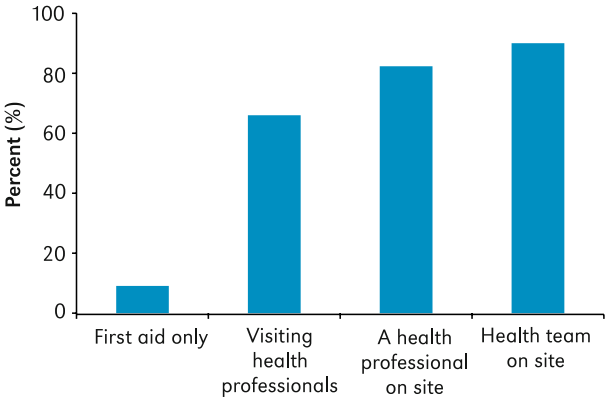
Figure 9:
Routine health screening in secondary schools (N= 90)



Relationships with local GP

Fifty-five schools (65%) indicated they have support from their local primary care provider. The most common forms of support were: support for standing orders so that a registered nurse at the school can prescribe specific medication under the authority of a local GP (n=28), GP back-up by phone (n=30), laboratory support (n = 28) or cover during the school holidays (n=6). Schools with on-site health staff were more likely to have support from a local primary health care provider than the schools with visiting health professionals.

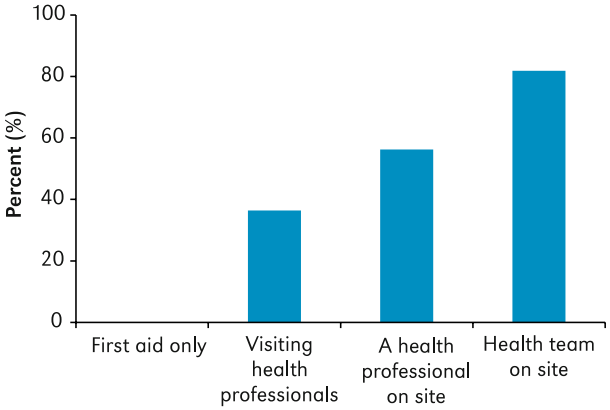
Figure 10:
Prevalence of support from local primary health care providers by level of health services in schools (N=90)



Relationships with local pharmacy

Thirty-four schools (42%) reported a relationship with a local pharmacy, with 7 pharmacies delivering medicines to the school and 6 providing medicines free of charge. These relationships were more common among schools with higher levels of health services.

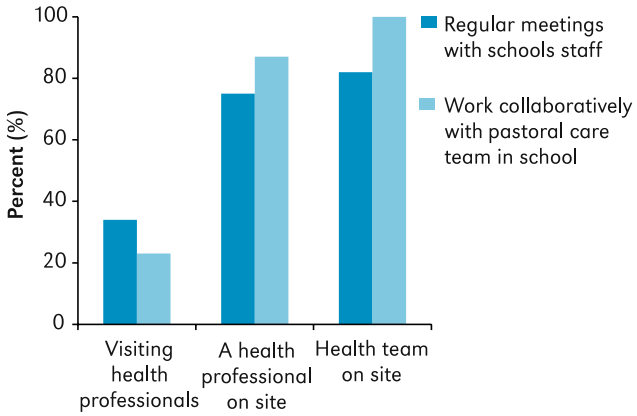
Figure 11:
Prevalence of support from local pharmacies by level of health services in schools (N=90)



Relationships with school

Among schools with some level of health service, 37 (51%) report that their health staff attend regular meetings with school staff to discuss issues and concerns about individual students. Most of the schools with health services (n = 41, 58%) report very good collaboration between health services and the school, 18 schools (25%) report medium levels of collaboration and 13 (18%) report poor collaboration between health services and the school. Collaboration varied with the level of health services within schools: on-site health staff were more likely than visiting health professionals to report good collaboration with school personnel.

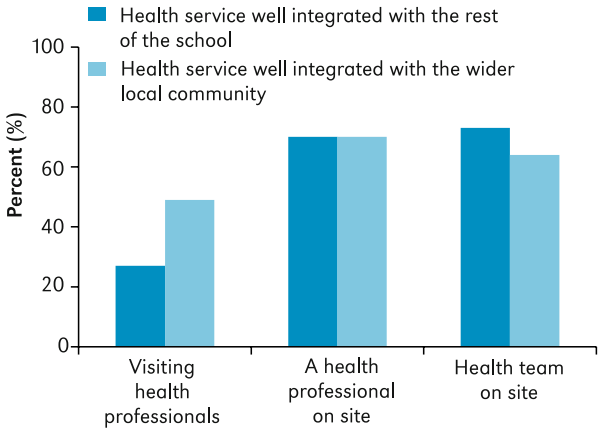
Figure 12: Prevalence of collaborative relationships with schools by level of health service (N=79)



Most schools with health services allow health professionals to refer directly to external agencies such as CAMHS, Family Planning and CYFS (n =66 in each case, 84%). The other schools require such referrals to be managed by school staff, usually school guidance counsellors.

Forty-four percent of schools with health services (n=33) report that their health services are well integrated with the rest of the school and over half (n=42, 56%) report the health service is well integrated with the wider local community.

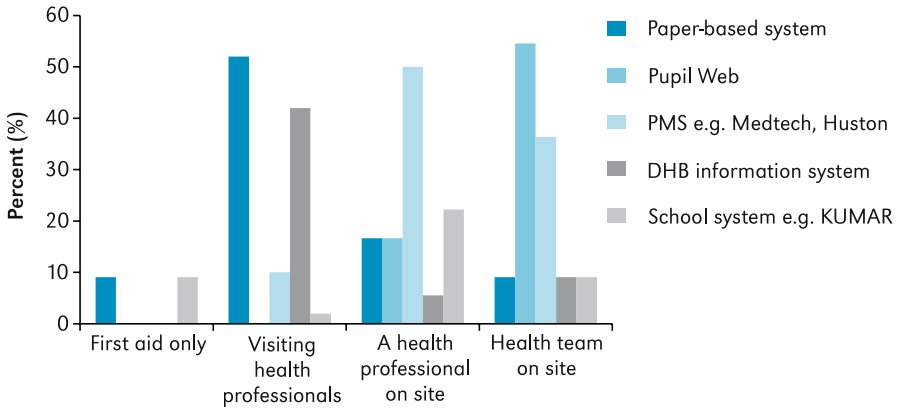
Figure 13: Integration of health services with the school and local community by level of health services (N=79)



Information systems used by school health services

Most school health services use paper-based information systems to record clinical notes etc. This was more common among schools with visiting health professionals than other types of school health services. Patient management software such as Medtech or Pupil Web were more common in schools with on-site health staff than schools with visiting health professionals. Schools with only first aid health services generally used no information systems apart from pen and paper (n=1) or school systems (n=1).

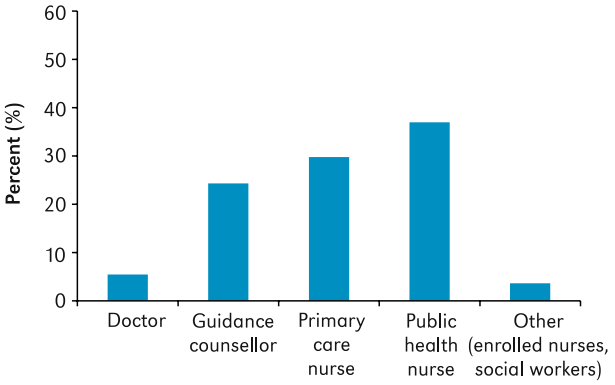
Figure 14: Prevalence of types of information systems by level of health services (N=90)



Health professionals in schools

Of the 129 health staff identified as working in or visiting the 90 schools surveyed, 113 completed the questionnaire on their professional practice and training. In some schools without on-site health staff the school guidance counsellor was the avenue for students to access health care; thus 27 guidance counsellors were included in the survey, along with 41 public health nurses, 33 primary care nurses, 6 doctors, 2 enrolled nurses and 2 social workers. Two health staff did not answer the question about their professional role.

Figure 15:
Professional role of staff who responded to the health staff survey (N=113)



The public health nurses worked, on average, 5.9 hours per week in the school; the primary care nurses 22.8 hours per week, and the doctors 4.5 hours per week.

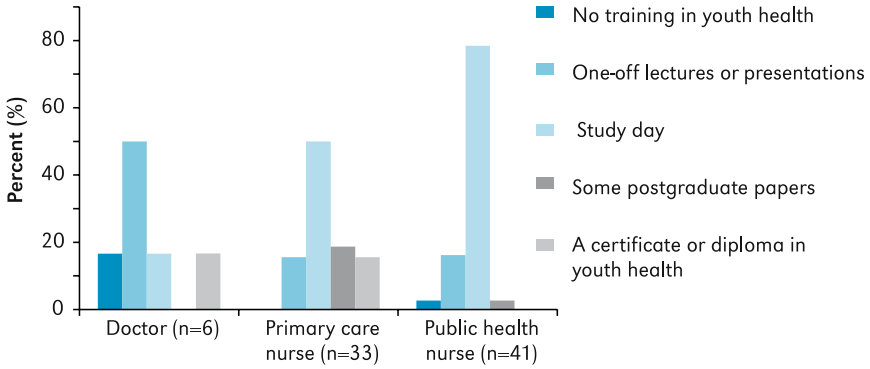
The following analyses focus on the training, support and level of health services reported by the 80 health professionals in the school health services: the registered nurses (public health nurses and primary care nurses) and doctors. It should be noted that the majority of the school guidance counsellors surveyed reported masters level qualifications in counselling or teaching, or an equivalent degree.

Level of training in youth health among health professionals in schools

Almost all of the health professionals working in or visiting schools (doctors and registered nurses, n= 80) have had some level of training in youth health, with 46 (58%) reporting they had attended a study day on youth health, 7 (9%) had completed some postgraduate papers in youth health, 6 (7.5%) had completed a postgraduate certificate or diploma in youth health, and 20 (25%) had received more general postgraduate training in child and youth health. There were very few health professionals who reported either no training at all (n=2, 2.5%) or no training in youth health (n=5, 6%).

The majority of the health professionals (n=58, 73%) have also had training in sexual health, either from Family Planning or other training institutions (e.g. sexual health papers through universities).

Figure 16: Level of training in youth health by professional role (N=80)

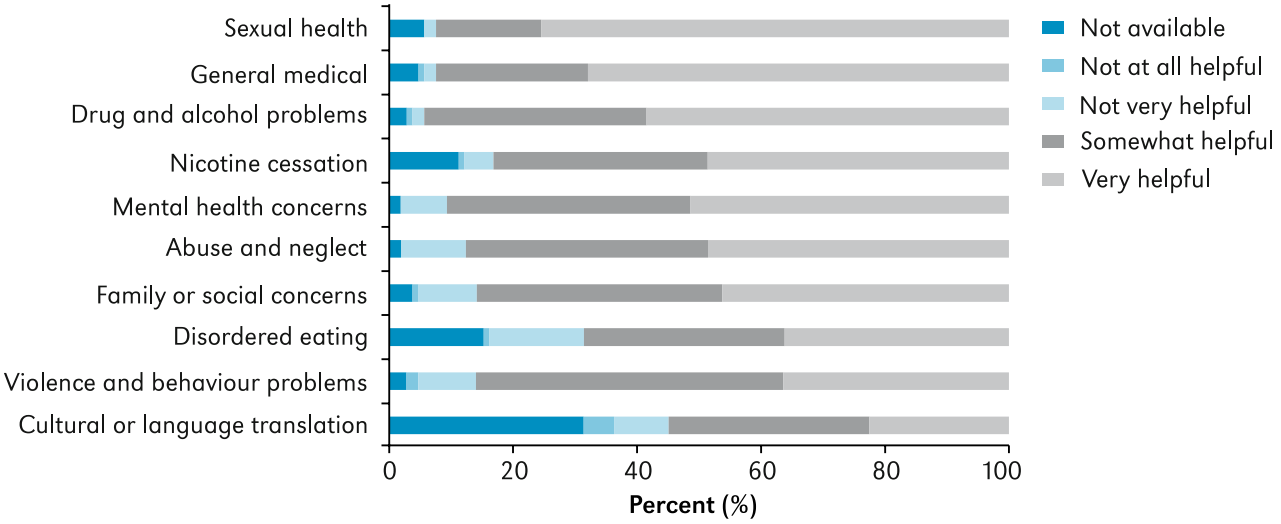


Most of the school health professionals (n=71, 89%) reported receiving ongoing training or professional development as part of their job. Not receiving ongoing training was most common among the doctors (n=4 of 6, 67%). Most school health professionals (n=46, 58%) were part of a professional peer group, with public health nurses (n=23 of 41, 56%) and doctors (n=3 of 6, 50%) most likely to report this peer support. Over three quarters of the primary care nurses reported not being part of a peer group that met outside of school, although this might be because they had a peer group that met within the school.

Availability of specialist support

Most school health professionals reported moderate levels of support when they need to refer or talk about a student with an area of concern (e.g. mental health concerns). Average availability scores for the different areas of specialist support ranged from 2.15 to 3.18 where 1 = not available, 2 = somewhat available, 3 = very available and 4 = extremely available. When able to access support, most school health professionals found the services somewhat or very helpful. Figure 17 presents the results for helpfulness of the different areas of specialist support, with non-availability included as the lowest level of helpfulness. The different areas of specialist support are ordered from the most available/helpful at the top to the least available/helpful at the bottom.

Figure 17: Availability and support for specific concerns (N=80)

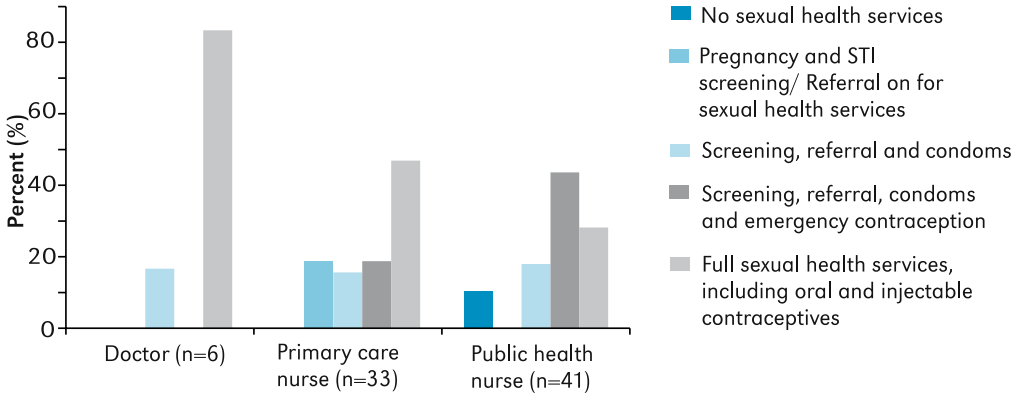


Level of sexual health services provided by school health professionals

All health services in schools must work within boundaries set by the school principal and governing Board of Trustees. Comments from the health staff surveyed indicate that the limitations set by school authorities are most commonly in the area of sexual and reproductive health. Some schools do not allow any sexual or reproductive health services at all on school grounds (but may allow health staff to arrange appointments or take students to services they need elsewhere); others rule out certain aspects only (such as contraceptive services); and some allow sexual and reproductive health services so long as they are not spoken about openly or advertised within the school.

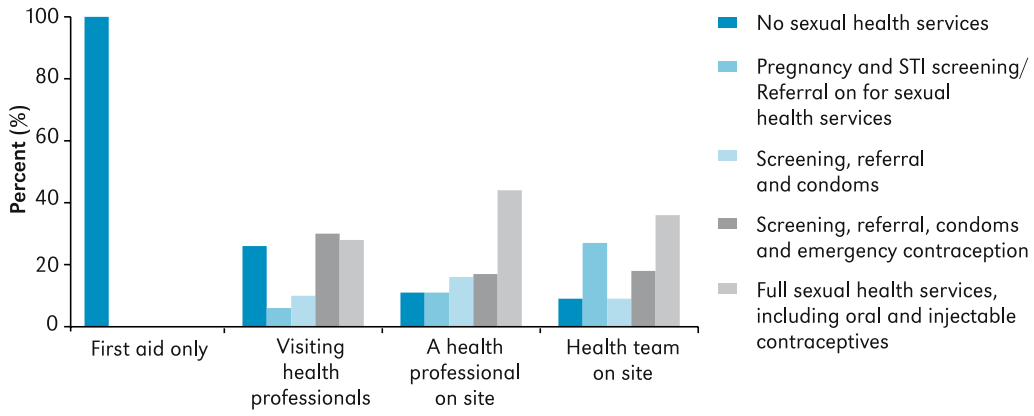
As a result there was a wide variation in the level of sexual health services provided by the health professionals working in or visiting schools.

Figure 18: Level of sexual health services provided by different health professionals



Most schools with health services provide some level of sexual health service, although some visiting public health nurses (n=4) reported that they did not provide any sexual health services. Students in schools without health services have no access to sexual health services.

Figure 19: Level of sexual health services provided in schools with different levels of health service



Issues and limiting factors faced by school health services

The online questionnaire completed by staff involved in school health services also allowed them to comment on issues facing those services and factors limiting the ability of health staff to work effectively with young people in the school. There were a number of common themes in these comments:

- All groups among the health care staff commented that they were constrained in what they could achieve by the limitations of funding, time, and contractual requirements.

  "We could do a lot if we were funded to do comprehensive physical and mental health assessments on all consenting students."
  ". . . insufficient time to spend with students, especially on-going, more complex cases"

- At rural schools health care was restricted by the limited access to specialist services.

  "Our isolation is the biggest [limiting] factor. I am, essentially, the only counselling support available for students. All specialised help, with the exception of General Medical and some Nicotine Cessation (through General Medical) needs to be accessed in ___, 2 hours away. While some services will travel, almost all require families to travel for initial assessments, and for specialists such as Psychologists."

- Facilities for health care at some schools were unsuitable in that students' privacy could not be assured and students were therefore reluctant to attend.

  "The clinic is situated right outside the staffroom. . . I wonder if there is a perception that we only deal with sex-related issues, so students don't like to be seen waiting for our clinic."

- Some schools placed partial or total restriction on the provision of sexual and reproductive health services.

  "The [School] Board of Trustees . . . refused all contraception service in the school. I am invited to provided two education sessions to year 10 students; one on contraception, and one on sexually transmitted infections. If I have a student referred to me by the guidance counsellor (infrequently) I can arrange an appointment off school site to see the local GP."

Section two:
School health services and health and wellbeing outcomes among students

How much effect do health services in schools have on the health and wellbeing of the students in these schools? Survey results cannot give an unequivocal answer - they cannot prove a cause and effect relationship between school health service inputs and improved student health outcomes – but they can show whether, other things being equal, schools with health services do have students with better health and wellbeing.

This section describes the levels of association found between various levels and qualities of the health services in schools, and a range of health and wellbeing outcomes among the students at the same schools. The health and wellbeing indicators examined relate to mental health issues, sexual health and reproductive health behaviours, drug and alcohol misuse, health care access and school engagement. As many of these health and wellbeing indicators are determined to some extent by social and demographic factors, the analyses utilised multilevel modelling to control for background student demographic variables in order to ascertain the independent effect of school health services on student health and wellbeing.

The background demographic variables controlled for in these analyses included age, gender, socio-economic status and ethnicity. The analyses presented in this section show the associations between the level of school health services and student health outcomes, taking into account these background demographic variables which might otherwise confound the results with spurious associations.

As can be seen from the results presented in the previous section, there is a great deal of variability between schools in the level and scope of health services provided for students. To allow for this heterogeneity of school health services, various features of school health services are examined including level of health service, infrastructure, training and continuing education of health staff, collaboration and support with the school and wider community. Separate multilevel regression models were run for each school-level variable against specific student health and wellbeing outcomes, taking into account the school and student-level demographic variables. Results are considered statistically significant when p values were less than 0.05.

Student health and wellbeing measures

The following health and wellbeing indicators were selected to capture the main behaviours and mental health concerns that have been shown to significantly affect the health and development of adolescents. These include mental health concerns such as depression and suicide risk, sexual health behaviours such as condom and contraception use, substance use, school engagement and health care utilisation

Table 2: Student health and wellbeing indicators and their definition and measurement

Mental health indicators	
Depression symptoms	This is measured by the Reynolds Adolescent Depression Scale – Short Form (RADS-SF). This is a well-validated measure designed to screen for depression among adolescents. The RADS-SF consists of ten questions each with four Likert response options. The mean score was 19.5 (SD = 6.4).
Suicide risk	Suicide risk was assessed by three questions: "During the last 12 months have you seriously thought about killing yourself?", "During the last 12 months have you made a plan about how you would kill yourself?" and "During the last 12 months have you tried to kill yourself (attempted suicide)?" with response options: 1="Not at all", 2="Not in the last 12 months", 3="Once or twice", and 4="Three or more times". Responses to these three questions were combined with mean score 1.26 (SD = 0.61) and Cronbach's alpha of 0.85.
Sexual and reproductive health indicators (among students who had had sex)	
Contraception use (last sex)	Assessed from the question "The last time you had sex did you use any form of contraception?" Response options were "Yes" or "No".
Condom use (last sex)	Assessed from the question "The last time you had sex did you use condoms as protection against sexually transmitted disease or infection?" Response options were "Yes" or "No".
Pregnancy involvement	Students' involvement in pregnancy was assessed by the question "Have you ever been pregnant or got someone pregnant (including miscarriage, abortion or termination)?" Response options were "Yes", "No", "Unsure" and "Does not apply to me". Students who replied "Unsure" or "Does not apply to me" were excluded from further analysis.
Substance use	
Cigarette use	This was assessed by two questions "Have you ever smoked a whole cigarette?" with response options "Yes" or "No" and "How often do you smoke cigarettes now?" with response options: "Never – I don't smoke now", "Occasionally", "Once or twice a month", "Once or twice a week", "Most days" and "Daily". Students who report smoking occasionally or more often were considered as smoking cigarettes.
Binge drinking	This was assessed by two questions "Have you ever drunk alcohol?" with response options "Yes" or "No" and "During the past 4 weeks, how many times did you have 5 or more alcoholic drinks in one session – within 4 hours?" with response options: "None at all", "Once in the past 4 weeks", "Two or three times in the past 4 weeks", "Every week", and "Several times a week". Students who reported binge drinking on one or more occasions in the past 4 weeks were considered as binge drinking.
Weekly marijuana use	This was assessed by two questions "Have you ever smoked marijuana (pot, grass, weed, cannabis)?" with response options "Yes" or "No" and "In the past 4 weeks, about how often did you smoke marijuana?" with response options: "Not at all – I don't smoke marijuana anymore", "None in the last 4 weeks", "Once in the last 4 weeks", "Two or three times in the last 4 weeks", "Once a week", "Several times a week", 'Every day" and "Several times a day". Students who report smoking weekly or more often were defined as weekly marijuana users.
Health care utilisation and access	
Forgone healthcare	Forgone health care was assessed by the question "In the past 12 months, has there been any time when you wanted or needed to see a doctor or nurse (or other health care worker) about your health, but weren't able to?" Response options were "Yes" or "No".
Hospital A & E use	This was assessed from the question "Which of the following places have you used for health care in the last 12 months? (you may choose as many as you need)". Response options included 9 places commonly accessed for health care including "The hospital Accident and Emergency".

Private and confidential care	This was assessed by two questions "In the last 12 months did you get a chance to talk to a doctor or other health provider privately (meaning one on one – without your parents or other people in the room)?" and "In the last 12 months, did a doctor or other health provider tell you that what you talked about with them was confidential (meaning it would not be shared with anyone else)?" Response options to both questions were "Yes" or "No". Students who responded "Yes" to both questions were classified as receiving private and confidential health care.
School engagement indicators	
School support and safety	This was assessed by nine questions: "How do you feel about school" with response options: "I like school a lot", "I like school a bit', "It's ok", "I don't like school", "I don't like school at all"; "Do you feel like you are part of your school?" with response options "Yes" and "No"; "How much do you feel that people at school care about you? (like teachers, coaches or other adults)" with response options: "Not at all", "Some" and "A lot"; "How often do the teachers at your school treat students fairly?" with response options "Hardly ever", "Sometimes" and "Most of the time"; "Do you get along with your teachers?" with response options "Usually", "Sometimes", "Hardly ever" and "Not at all"; "Do you feel safe in your school?" with response options "Yes, all the time", "Yes, most of the time", "About half the time", "No, less than half the time" and "No, not at all"; "In the last 12 months, how often have you been afraid someone will hurt or bother you at school?" with response options "Never", "Once or twice", "3 – 5 times", "6 or more times"; "In the last 12 months how often have you been bullied in school?" with response options "I haven't been bullied in school", "I haven't been bullied in the past 12 months", "It has happened once or twice", "About once a week", "Several times a week" and "Most days". Items were standardised and combined with a range from -4.1 to 0.9 and a Cronbach's alpha of 0.76 for the resulting scale.
Truanting	This was assessed by two questions, "In the last 12 months, have you wagged or skipped school for a full day or more without an excuse?" with response options "Yes" and "No" and "About how many days altogether have you wagged or skipped school in the last 12 months?" with response options 1 through 9 and "10 or more". Students who responded that they had truanted for 4 or more days were considered as truanting.

Individual student social and demographic variables

To reduce the possible confounding effects of background characteristics of students on any associations between school health services and student health and wellbeing outcomes, multilevel models were used which controlled for individual student social and demographic variables. Age, gender and ethnicity of students were determined by self-report. Ethnicity was assessed using the standard ethnicity question developed for the New Zealand Census where participants can select all of the ethnic groups with which they identify. Approximately 42% of students identified with more than one ethnic group. To facilitate statistical analyses, discrete ethnic populations were created using the New Zealand census prioritization method by assigning these multi-ethnic students to one ethnic group in the following order: Māori (20%), Pacific (14%), Asian (12.4%), New Zealand European (47.3%) and Other (6.0%) ethnicities.

The socioeconomic status of each student was measured by 9 items: whether their parents worry about having enough money to buy food; number of times the family has moved homes; number of cars, telephones, computers/laptops, televisions at the student's home; alternative rooms at home used as bedrooms; times travelling away on holiday with their family; and the New Zealand Deprivation Score 2006 (NZDep). These nine measures were combined into a socio-economic deprivation scale with a range from -2.39 to 0.94 and Cronbach's alpha of 0.68.

Results

The following tables summarise the findings. Where there is a statistically significant beneficial association between an aspect of school health services and an indicator of health among the students, a plus sign is shown. Where there is a statistically significant negative association a minus sign is shown. Where there is no statistically significant association the cell is left blank. The strength of the association is shown by the number of '+' or '-' signs: one '+' sign indicates a small effect size (Cohen's d greater than 0.2), two '+' signs indicate a moderate effect size (Cohen's d greater than 0.5) and three '+' signs indicate a large effect size (Cohen's d greater than 0.8).

It should be noted that a statistically significant association between an aspect of school health services and health outcomes among students provides some evidence of effectiveness of the school health services but not unequivocal proof. We can show association but not causation between the provision of school health services and improved health outcomes. Conversely, a finding of no statistically significant association between some aspect of school health services and health outcomes among students does not necessarily mean that school health services are not effective. It may instead arise from insufficient sensitivity or statistical power of the study to detect associations, the relatively small number of schools in the survey sample, or insufficient precision in our measures of aspects of health services in schools and health outcomes among students. Altogether, the results provide indicative but not conclusive evidence of the effectiveness or ineffectiveness of school health services.

Mental health

Table 3 shows the associations between various aspects of health services in secondary schools, and mental health outcomes among the students at those schools. There was less overall depression and suicide risk among students attending schools with any level of school health services compared to schools with first aid health services only. This association was most clearly seen in schools with a health team on site for most of the school week. Better emotional wellbeing was associated with schools with higher ratios of nursing time per one hundred students, with schools with health services performing routine psycho-social health screening (HEEADSSS), and with schools with health staff trained in youth health. The last factor, training in youth health, included study days, postgraduate papers, and postgraduate qualifications in youth health, but the association was strongest among schools with staff with postgraduate training, i.e. papers or qualifications in youth health. There was a small association between a higher level of school health clinic facilities, and lower overall depression scores among students. There was also a small association between school health services having good collaboration with local primary care providers, and lower overall depression scores among students. Health services where the health professionals had peer review were associated with a slightly lower overall suicide risk among students. There was also a moderate association between more hours of doctor time in schools and lower levels of suicide risk among students. Taken overall there was a strong association between school health services and mental health outcomes – other things being equal, students at schools with health services have better mental health.

Table 3:
Associations between School Health Services and mental health outcomes among students

	Less depression symptoms	Less suicide risk
Level of health service		
Regular clinics by visiting health professional	+	+
One person on site	++	++
Health team on site	+++	++
Nursing and Doctor time		
0 to 2.5 hours of nursing time per week per 100 students	++	+
More than 2.5 hours of nursing time per week per 100 students	+++	++
Hours of GP time per week per100 students		++
Infrastructure		
HEEADSSS screening	++	
Facilities	+	
Training and continuing education		
Youth health training – study days	+	++
Youth health training – postgraduate	+++	++
Peer review group		+
Collaboration and support		
With pastoral care team		
With local GP/ PHO	+	
Team meetings		
Specialist support – mental health		

Note: + indicates a small effect size, ++ indicates a moderate effect size, +++ indicates a strong effect size

Sexual health and reproductive health outcomes

Table 4 shows the associations between various aspects of health services in secondary schools, and sexual health and reproductive health outcomes among the students at those schools. There was a moderate association between the provision of any sexual health services in schools and better contraception use at last sex among the female students. This held for schools providing any form of sexual and reproductive health services, such as pregnancy or STI testing, through to schools with a full range of sexual and reproductive health services. There was also an association between school health services with staff trained in youth health, and better contraception use at last sex among the female students. Training in youth health included study days, postgraduate papers and postgraduate qualifications in youth health. There was a small negative association between HEADDSS screening and lower contraception use among the female students. There was no association between any aspect of school health services and self-reported pregnancy rates among the students or condom use at last sex among the male students. Overall there were few significant associations between school health services and sexual and reproductive health outcomes among students.

Table 4:
Associations between School Health Services and sexual health outcomes among students

	Condom use at last sex (among sexually active males)	Contraception use at last sex (among sexually active females)	Self-reported pregnancy
Level of health service			
Regular clinics by visiting health professional			
One person on site			
Health team on site			
Nursing and doctor time			
0 to 2.5 hours of nursing time per week per 100 students			
More than 2.5 hours of nursing time per week per 100 students			
Hours of GP time per week per100 students			
Infrastructure			
HEEADSSS screening		-	
Facilities			
Sexual health services		++	
Training and continuing education			
Youth health training		++	
Sexual health training			
Peer review group			
Collaboration and support			
With pastoral care team			
With local GP/ PHO			
Meetings with school			
Specialist support – sexual health			

Note: + indicates a small effect size, ++ indicates a moderate effect size, +++ indicates a strong effect size

Drug and alcohol use

Table 5 shows the associations between various aspects of health services in secondary schools, and drug and alcohol use among the students at those schools. Overall there were few significant associations in this area. In schools with a health team on site for most of the week, there was a small association with less binge drinking among students in those schools. There was also a relatively weak association between school health services with staff trained in youth health, and less binge drinking among students. There was no association between health services in schools and the level of students' use of cigarettes or marijuana.

Table 5:
Associations between School Health Services and drug and alcohol use among students

	Cigarette use	Less binge drinking	Marijuana use
Level of health service			
Regular clinics by visiting health professional		-	
One person on site		-	
Health team on site		+	
Nursing and doctor time			
0 to 2.5 hours of nursing time per week per 100 students			
More than 2.5 hours of nursing time per week per 100 students			
Hours of GP time per week per100 students			
Infrastructure			
HEEADSSS screening			
Facilities			
Training and continuing education			
Youth health training		+	
Peer review group			
Collaboration and support			
With pastoral care team			
With local GP/ PHO			
Meetings with school			
Specialist support – drug and alcohol			

Note: + indicates a small effect size, ++ indicates a moderate effect size, +++ indicates a strong effect size

Health care access

Table 6 shows the associations between various aspects of health services in secondary schools, and health-care access issues among the students at those schools. There was an association between schools with any provision of health services and less use of hospital A & E by students in those schools. Less A & E use among students was associated with health services providing more hours of nursing time per week per100 students and with health services that did routine psycho-social HEEADSSS screening. Less A & E use by students was also associated with health services where the health professionals had professional peer review, and where there were regular meetings between the health professionals and the school.

Private and confidential health care for adolescents is an important indicator of high quality health services. There were moderate associations between health services with health staff on site in schools, and students at those schools reporting private and confidential health care. There was also a moderate association between school health services which undertook routine psycho-social HEEADSSS assessments, and students at those schools reporting private and confidential care. There was no relationship between any aspects of health services in schools and students reporting they had forgone health care in the last 12 months. Taken overall, there were associations between school health services and both reduced use of hospital A & E, and increased levels of private and confidential health care reported by the students.

Table 6:
Associations between School Health Services and health care access issues among students

	Forgone healthcare	Less Hospital A & E use	Private and confidential care
Level of health service			
Regular clinics by visiting health professional		+	+
One person on site		+	++
Health team on site		+	++
Nursing and doctor time			
0 to 2.5 hours of nursing time per week per 100 students			
More than 2.5 hours of nursing time per week per 100 students		++	++
Hours of GP time per week per 100 students			
Infrastructure			
HEEADSSS screening		++	++
Facilities			
Sexual health services			
Training and peer review			
Youth health training			
Sexual health training			
Peer review group		+	
Collaboration and support			
With pastoral care team		+	
With local GP/ PHO			
Meetings with school		++	
Specialist support – sexual health			

Note: + indicates a small effect size, ++ indicates a moderate effect size, +++ indicates a strong effect size

School engagement

Table 7 shows the associations between various aspects of health services in secondary schools, and levels of school engagement among the students in those schools. Better school engagement was reported by students in schools with a heath team on site for most of the week, with health services providing more hours of nursing time per week per 100 students, and with health services which undertook routine psycho-social HEEADSSS screening of students. There was a moderate association between health services where the health professionals had completed postgraduate papers in youth health, and better school engagement among the students in those schools. There was no association between any aspect of health service in schools and the level of significant truanting (truanting four or more days in a year) among students.

Table 7:
Associations between School Health Services and school engagement indicators among students

	Better School engagement	Less truanting
Level of health service		
Regular clinics by visiting health professional		
One person on site		
Health team on site	+	
Nursing and doctor time		
0 to 2.5 hours of nursing time per week per 100 students	-	
More than 2.5 hours of nursing time per week per100 students	++	
Hours of GP time per week per100 students		
Infrastructure		
HEEADSSS screening	++	
Facilities		
Training and continuing education		
Youth health training	++	
Peer review group		
Collaboration and support		
With pastoral care team		
With local GP/ PHO		
Meetings with school		

Note + indicates a small effect size, ++ indicates a moderate effect size, +++ indicates a strong effect size

Summary

Overall these results indicate that high quality school health services that have health professionals on site at the school, who have sufficient time to work with students, are well trained in youth health, and perform tasks like routine HEEADSSS assessments, do impact positively on student health and wellbeing outcomes such as depression, suicide risk, sexual health, alcohol misuse and school engagement. The results also indicate that high quality school health services lessen the use of hospital A & E by students. However, full school health services are not available in all secondary schools. Further investment and resourcing of school health services could have a positive impact on the health and wellbeing of secondary school students in New Zealand.

References

Clark, T.C., Fleming, T., Bullen, P., Crengle, S., Denny, S., Dyson, B., Fortune, S., Peiris-John, R., Robinson, E., Rossen, F., Sheridan, J., Teevale, T. & Utter, J. (2013). *Youth'12 Prevalence Tables: The health and wellbeing of New Zealand secondary school students in 2012*. Auckland, New Zealand: The University of Auckland.

Denny, S., Robinson, E., Lawler, C., Bagshaw, S., Farrant, B., Bell, F., Dawson, D., Nicholson, D., Hart, M., Fleming, T., Ameratunga, S., Clark, T., Kekus, M. & Utter, J. (2012). Association between availability and quality of health services in schools and reproductive health outcomes among students: a multilevel observational study. *American Journal of Public Health, 102, e14-e29.*

Ethier, K. A., Dittus, P. J., DeRosa, C. J., Chung, E. Q., Martinez, E., & Kerndt, P. R. (2011). School-based health center access, reproductive health care, and contraceptive use among sexually experienced high school students. *Journal of Adolescent Health, 48*(6), 562-565.

Kirby, D., Waszak, C., & Ziegler, J. (1991). Six school-based clinics: their reproductive health services and impact on sexual behavior. *Family Planning Perspectives, 23*(1), 6-16.

Kisker, E. E., & Brown, R. S. (1996). Do school-based health centers improve adolescents' access to health care, health status, and risk-taking behavior? *Journal of Adolescent Health, 18*(5), 335-343.

Robinson, W. L., Harper, G. W., & Schoeny, M. E. (2003). Reducing substance use among African American adolescents: effectiveness of school-based health centers. *Clinical Psychology: Science and Practice, 10*(4), 491-504.

Appendices

Appendix One: Questionnaire on characteristics of participating schools and students

Health Services Questionnaire

School Health Clinic Leader Questionnaire

***1. What is the name of the school you work at?**

2. What facilities does your school health service have? (You can tick as many as apply).

- [ ] Sick bay managed by non-health professionals
- [ ] A private dedicated health clinic for a school nurse
- [ ] Nurse rooms (separate from sick bay)
- [ ] Rooms for others e.g. social worker
- [ ] Toilet facilities for students within the health clinic
- [ ] Computers - for health clinic staff
- [ ] A designated waiting area
- [ ] Reception

Other (please specify)

3. Which of the following best describes the level of service your school health service provides?

- ◯ First aid and urgent health care
- ◯ Regular health clinics from visiting health professionals
- ◯ Approximately one health professional on-site for most of the week
- ◯ A health team on-site for most of the school week

4. Does the health service at your school undertake routine comprehensive (physical and psycho-social) health assessments of students?

- ◯ Yes
- ◯ No

5. Does this include a HEEADSSS assessment?

- ◯ Yes
- ◯ No

Health Services Questionnaire

6. Could you briefly describe the routine comprehensive (physical and psycho-social) health assessments?

7. In which years do students receive a routine comprehensive (physical and psycho-social) health assessment? (You can tick as many as apply):

- [ ] Year 9
- [ ] Year 10
- [ ] Year 11
- [ ] Year 12
- [ ] Year 13

Other (please specify)

8. Does your school health service have a relationship with a local primary care provider (e.g. local GP, hospital, Independent Nurse Practitioner)?

- ◯ Yes
- ◯ No

9. What support does the GP, Nurse Practitioner etc provide your school health service with? (You can tick as many as apply)

- [ ] Sign off for standing orders for prescription medications
- [ ] Lab provider number and support when ordering laboratory tests
- [ ] GP back-up by phone
- [ ] Medical cover over the school holidays

Other (please specify)

Health Services Questionnaire

10. Does your school have a relationship with a local pharmacy?

- ◯ Yes
- ◯ No

11. Does the pharmacy deliver medications to the school?

- ◯ Yes
- ◯ No

12. Does the pharmacy provide medications free of charge?

- ◯ Yes
- ◯ No

Other (please specify)

13. Does the school nurse or anyone from the school health services attend any regular meetings with school staff to discuss issues and concerns about individual students, such as pastoral care meetings?

- ◯ No
- ◯ Yes

If yes, how often are these meeting held?

14. Does the pastoral care team work collaboratively with the school health services personnel?

- ◯ Yes - we have a very good working relationship
- ◯ Somewhat - there have been difficulties at times
- ◯ No - not at all, there is no collaboration

Other (please specify)

Health Services Questionnaire

15. Are you (or any of your health team) part of a peer review group in your school?

- ◯ No, not at this school
- ◯ Yes, in a group with other colleagues from this school
- ◯ Yes, in a group with other colleagues from outside this school
- ◯ Yes, in a group with colleagues from both within and outside this school

16. How often does the peer review group meet?

17. Is the peer review group multi-disciplinary?

- ◯ Yes
- ◯ No

18. Does the peer review group include the pastoral care team (e.g. school guidance counsellors, deans etc.)?

- ◯ Yes
- ◯ No

19. Can your health service refer students directly to the following external agencies?

	Yes	No
Child and Adolescent Mental Health Services	◯	◯
If not directly, how do you refer?		
Sexual Health/ Family Planning services	◯	◯
If not directly, how do you refer?		
Child, Youth and Family Services (CYFS)	◯	◯
If not directly, how do you refer?		

Health Services Questionnaire

20. How integrated are the health services with the rest of the school?

- ◯ Not at all - the health services work in isolation from the rest of the school
- ◯ A little – health personnel are known within the school
- ◯ A moderate amount – health personnel are part of the school
- ◯ A lot - health services and the health personnel are fully integrated with the wider school community

21. How integrated is the school health service with the wider local community?

- ◯ Not at all: school health staff don't connect with other health services in the local community
- ◯ A little: school health staff connect with other health services in the local community
- ◯ A moderate amount: school health staff connect with health and other social services in the local community
- ◯ A lot: school health staff are fully integrated with a wide range of health, social, justice, sporting, youth and cultural groups/agencies in the local community

22. What Information system does your school health service use? (You can tick as many as apply)

- ☐ Paper-based system
- ☐ Pupil Web (Counties Manukau – web based or access version)
- ☐ A patient management system (e.g. Medtech, Huston, MyPractice/Intrahealth)
- ☐ DHB information system (e.g. Concerto)

Other IT system please specify

23. Does your school have any student-led health initiatives (e.g. a student health council, student health week)?

- ◯ No
- ◯ Yes

If yes, please briefly describe

Health Services Questionnaire

24. What are the sources of funding for your school health service and approximately how much funding is this? (You can fill in as many as apply)

SBHS contract in decile 1&2 school	
DHB	
MSD	
School's operational budget	
PHO	
Community grants	
ACC	
Other (please specify)	

25. What is the total budget of the school health service (if known)?

26. What are the main issues facing the school health services at your school?

Thank you very much for your time and for helping with this research

Appendix Two: Questionnaire on characteristics of School Health Services

School Health Staff Questionnaire

Questionnaire on School Health Services for Students

***1. Please fill in the name of the school this survey is about:**

2. Are you based on-site or do you visit this school?

- ◯ On-site
- ◯ Visiting this school

If visiting, how many other schools do you work at?

3. What is your professional role in this school?

- ◯ Doctor
- ◯ Registered nurse (Primary Care)
- ◯ Registered nurse (Public Health)
- ◯ Enrolled nurse
- ◯ Social Worker
- ◯ Youth worker
- ◯ Other (please specify)

4. How many hours per week do you usually work at this school?

Usual hours per week

School Health Staff Questionnaire

5. Who holds your contract (ie, who employs you) for your work at this school? (You can tick as many as apply)

- [ ] I am paid by the school
- [ ] I am paid by the school through a DHB contract
- [ ] I am paid by the DHB Public Health Unit
- [ ] I am paid by the DHB (not in the Public Health Nurse Unit)
- [ ] I am a paid by a Primary Health Organisation (PHO)
- [ ] I am paid by my organisation (e.g. Family Planning)
- [ ] Other (i.e. University, NGO etc) please specify

6. Do you conduct opportunistic HEEADDSSS assessments of students at this school?

- ◯ No
- ◯ Yes - occasionally
- ◯ Yes - often, with most students

Other (please specify)

7. What sexual health services do you provide at this school? (You can tick as many as apply)

- [ ] None
- [ ] Pregnancy testing
- [ ] STI screening
- [ ] Counselling and referral
- [ ] Condoms
- [ ] Emergency contraception
- [ ] Oral contraceptives
- [ ] Depo-provera injections
- [ ] Other contraception
- [ ] Safe sex counselling
- [ ] Other (please specify)

School Health Staff Questionnaire

8. What training/ professional development in youth health have you had? (You can tick as many as apply)

- [ ] None
- [ ] I have received informal teaching
- [ ] I have attended one-off lectures, or workshops or presentations on youth health
- [ ] I have attended full study days on youth health (e.g. HEEADSSS study days)
- [ ] I have completed some postgraduate papers in youth health
- [ ] I have completed some postgraduate papers in child and youth health
- [ ] I have a postgraduate certificate in youth health
- [ ] I have a postgraduate diploma in youth health
- [ ] I have a certificate in contraception and sexual health (Family Planning)
- [ ] I have completed other Family Planning training
- [ ] I have completed postgraduate papers in child and youth health (e.g. AUT, Auckland University, EIT, Massey University)
- [ ] I have completed other papers or degrees (e.g. mental health, alcohol and drug issues, talking therapies etc). Please specify:

9. Have you completed any of the postgraduate papers in Youth Health at the University of Auckland? (You can tick as many as apply)

- [ ] No
- [ ] PAEDS712: Youth Health Clinical Skills
- [ ] PAEDS719: Health, Education and Youth Development
- [ ] POPHLTH732: Population Youth Health
- [ ] PAEDS720: Youth Health Theory, Application and Leadership

10. Do you receive ongoing training/ professional development (eg. Continuing Nursing Education or Continuing Medical Education) as part of your job?

- ◯ No
- ◯ Yes

If yes, how many days per year?

School Health Staff Questionnaire

11. Are you part of a peer review group that meets outside this school?

- ◯ Yes
- ◯ No

12. Approximately, how often do you meet with the professional case discussion/ peer review group?

- ◯ Weekly
- ◯ Fortnightly
- ◯ Monthly
- ◯ Every term
- ◯ About twice a year

Other (please specify)

13. Is this professional case discussion/ peer review group multidisciplinary?

- ◯ Yes
- ◯ No

14. Is meeting with this professional case discussion/ peer review group part of your contract or in your own time?

- ◯ Contract/ funded
- ◯ Own time

Other (please specify)

School Health Staff Questionnaire

15. How available is specialist support when you need to refer or talk about a student in this school with one of the following areas of concern?

	Not available	Somewhat available	Very available	Extremely available
General medical	◯	◯	◯	◯
Nicotine cessation and addiction treatment	◯	◯	◯	◯
Drug and Alcohol problems	◯	◯	◯	◯
Mental Health concerns	◯	◯	◯	◯
Sexual Health	◯	◯	◯	◯
Abuse and neglect	◯	◯	◯	◯
Family or social concerns (i.e. family counselling etc)	◯	◯	◯	◯
Violence and behaviour problems	◯	◯	◯	◯
Disordered eating	◯	◯	◯	◯
Cultural or language translation services	◯	◯	◯	◯

16. How helpful is the specialist support? (If specialist support is not available tick N/A)

	Not at all helpful	Not very helpful	Somewhat helpful	Very helpful	N/A
General medical	◯	◯	◯	◯	◯
Nicotine cessation and addiction treatment	◯	◯	◯	◯	◯
Drug and Alcohol problems	◯	◯	◯	◯	◯
Mental Health concerns	◯	◯	◯	◯	◯
Sexual Health	◯	◯	◯	◯	◯
Abuse and neglect	◯	◯	◯	◯	◯
Family or social concerns (i.e. family counselling etc)	◯	◯	◯	◯	◯
Violence and behaviour problems	◯	◯	◯	◯	◯
Disordered eating	◯	◯	◯	◯	◯
Cultural or language translation services	◯	◯	◯	◯	◯

School Health Staff Questionnaire

17. What are the main issues limiting your ability to work effectively with young people in this school?

Thank you very much for your time and for helping with this research

Adolescent Health Research Group
www.youthresearch.auckland.ac.nz