Original article

High school health curriculum and health literacy: Canadian student voices
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Abstract: This study explores the relevance of health literacy, and its development through a health curriculum, as a necessary but insufficient component to facilitate healthy living among adolescents through comprehensive school health models. This paper presents qualitative findings from focus groups with students (N = 33) in four schools toward the end of their experience in a health class that focused on topics related to healthy living, healthy relationships, health information and decision-making. Students reported mostly negative experiences citing repetitive course content, routinely delivered by teachers and passively received by students. As well, students described their experiences of using health information sources beyond the classroom, such as the media. The findings suggest that the curriculum, and particularly its implementation, have had limited effect on health literacy: students’ abilities to access, understand, communicate and evaluate health information. The paper concludes with recommendations for improving health education. (Global Health Promotion, 2009; 16(4): pp. 35-42)

Key words: adolescents, health curriculum, health education, health literacy

Introduction

Concern about the health of adolescents has greatly increased (1, 2) among society at large, and among adolescents themselves (3). We know that their levels of physical activity engagement are plummeting as obesity soars, and rates of substance use have lingered without change (4, 5). As a society, however, we find ourselves at a loss about how to spend scarce resources to address the crisis in adolescent health. School health education interventions provide a promising avenue to improve levels of health literacy (7), which, in turn, may have an influence on health behaviours.

Our society believes that it is critical for our future citizens to be knowledgeable and health literate consumers. Adolescents need to gain the ‘currency’ (8) to navigate an increasingly complex and cluttered landscape of health information. Schools are now the one (perhaps the only) institution that touches the lives of most adolescents. Schools can provide students with the literacy skills to understand health information, solve health problems and make critical health decisions (11). Health curricula are specifically designed to address this learning need. There is, however, a paucity of research that explores both the influence of health education on health literacy (6), and the experiences of students within this educational context.

A myriad of broader environmental influences, in addition to health curricula, may also have an impact...
on adolescent understanding about healthy behaviours. Parents, government officials, non-governmental agencies and commercial business interests (e.g. through the media) also play a role influencing our adolescents’ understanding of health issues such as road safety, sexual decision making, exercise, nutrition, and substance use – for good and ill. We do not know, however, the extent to which adolescent health literacy is influenced by pressures outside the school.

We recognize that health is both a social and an individual issue, and drew upon social constructivism and social ecology theories to guide this study. Social constructivism posits that knowledge is built in collaboration with others (e.g. 10). A social constructivist framework recognizes the dynamic, multiplicitous and social nature of knowledge construction and learning, positing that learning occurs when people work in conjunction with others and with their surroundings. In this study we evaluated the curriculum by examining the development of knowledge, skills and attitudes as students reported their occurrence during relationships between and among students, teachers, family members and the broader community. Likewise, the social-ecological model posits that individual behaviour and social influences are interrelated. Individual health attitudes and behaviours are dynamic constructions informed, influenced and created by multiple environmental and social factors interacting at once (11).

In this article, we present findings from the first year of a three year study in which we examined the health component of the newly implemented Planning 10 curriculum (13) from British Columbia (BC), Canada as it was experienced by students, and specifically, to examine how it contributes to grade 10 students’ health literacy and how context influences health education. We repeated the same collection in the subsequent two years with grade 11 and 12 students and will report our findings in the future.

Health literacy

In its broadest and most complex form, health literacy is the ability to understand and evaluate health information in ways that allow individuals to take control of their own health (12). We suggest that, for students of health education, achieving health literacy is a necessary step on the way to healthy behaviour. For the purposes of our study, examining the extent to which Planning 10 develops adolescents’ health literacy, we defined health literacy as the ability to access, understand, evaluate and communicate health information (12, p. 165).

The Planning 10 curriculum

Planning 10 was piloted in British Columbia in 2004–5 and made mandatory for all grade 10 students in the school year 2005–6. The curriculum has four components, of which health is one, defined in this curriculum as ‘physical, social, and mental well-being’ (13, p. 53). The health component of Planning 10, allotted a suggested 36 hours of instructional time, has four sections: healthy living, health information, healthy relationships and health decisions, and purports to ‘provide opportunities for students to think critically about health issues and decisions’ (13, p. 3). Planning 10 is a single course taught by one teacher.

Method

Participants and settings

Participants were 14 and 15 year old students (N = 33) enrolled in Planning 10 in British Columbia, Canada. They were recruited by researchers during class and volunteered to participate in one of the six focus groups conducted at four schools. Female students (n = 18) were the majority in each focus group. Ethical approval was received from the authors’ institution and the school districts prior to data collection. Students signed consent forms indicating they understood the purpose of the study, and how their identities and data were to be protected.

Two schools had one year of experience piloting Planning 10 and were beginning their second year when our project began, while two schools were in their first year of offering Planning 10. The schools served a mix of urban and rural areas, including one school with half of its students from single parent families, and/or were Aboriginal students.

Data collection

All focus groups were conducted in late May and early June, which is near the end of the course and
the school year. Focus groups were conducted over the noon hour and lunch was provided. All focus groups were asked the same basic questions in a semi-structured format. Conversations were recorded by audiotape and field notes, and later transcribed. First, they were asked to evaluate the relative importance of Planning 10 health topics: healthy living, health information, healthy relationships, and health decisions. They were also asked if other topics should be added. Second, they were asked to rate themselves in terms of being able to find, understand, evaluate, and communicate health literacy. They were also asked what helps them to accomplish these tasks. Third, they were asked whether the health module of Planning 10 helped them to increase their health literacy and how it could help them and their classmates achieve better health literacy. Finally, students were asked about the influence of the school, community, and society on student health literacy. Specifically, we asked them to comment on the main influence(s) outside of their Planning 10 class and the importance of this influence relative to the impact of their school health education.

Data analysis

A semantic analysis was applied by reading all transcripts of focus groups and recording salient themes and categories (16). Categories were refined as data collection and analysis continued in tandem (17, 18). Analytic induction (19), and constant-comparison analysis (18), progressively moved the analysis to higher levels of abstraction. These categories were used to re-analyze the data and became the major themes within each case (school) and across cases (all schools), which were compared to determine overarching themes that go beyond the individual case analyses (18).

Results

Across the four schools, three themes emerged that related to the content of the curriculum: the quality and quantity of the health information disseminated in class; the communication or teaching styles through which the information was delivered; and students’ experiences of using health information sources beyond the classroom.

Theme 1: class content

All four topics of the curriculum – healthy living, health information, healthy relationships and health decisions – were deemed important by some of the students. Students from only one school supported the inclusion of all four subtopics in the health module, while health decisions were supported for inclusion by students in all schools. ‘Healthy relationships’ was supported by focus group members at three schools; ‘healthy living’ and ‘health information’ were praised as topics at two schools. However, students were generally very negative about their experiences with the health content of Planning 10. Students reported hearing information already learned in previous grades or from other experiences in and outside of school. Some students were very critical of ‘drunk driving’ and ‘the sex talk’ as Planning 10 topics. ‘It’s just kind of repetitive’ one student said. Others agreed that topics seemed to be repeated, ‘We always talk about the STDs [sexually transmitted diseases] and we always talk about drugs … we already know this.’ In general, students commented on the lack of development of their health knowledge, because they perceived they were learning old material.

Students also expressed dislike for the overly generalized information they received, requesting more personalized assistance or at least some opportunity to individualize information to make it personally relevant. One student commented: ‘The school system’s trying to give you more of the outline, not what to fill in the box … ’ For some students, the information was uninteresting. They pointed out that much of the information provided was not learned because ‘students don’t necessarily have the incentive to look at it, even if [it is] given to them in an assignment … ’ Other students agreed, saying ‘if you’re not interested, I doubt anybody will listen.’

Moreover, and related to the general nature of the information covered, students found that topics were frequently glossed over or too broadly discussed. For example, one student commented ‘It doesn’t really get into depth of what I actually need to know and stuff … they kind of just run through something in like two days.’ Similarly, another student offered ‘Wouldn’t it be more effective to more zero in on the more important things and therefore get, a really good understanding of the more important things instead of just looking at the
broader view ... ?’ Another student agreed that the information currently in the course was in ‘huge ... categories,’ but also acknowledged the difficulty that there were still other topics ‘that wouldn’t fit under those categories that we need to talk about.’

Students suggested new topics they felt would be more relevant and meaningful to their lives: ‘depression and stuff like that, or anorexia, or, like different types of problems that people our age might be going through,’ ‘rescue breathing and first aid training,’ ‘teen pregnancy,’ and ‘road safety besides don’t drink and drive.’ While one student suggested more discussion of ‘common diseases’ such as cancer, others disagreed, arguing that HIV/AIDS was a more appropriate topic for an adolescent population.

Further suggestions included topics related to: a healthy environment such as biohazards, alternative life styles (e.g. vegetarianism), and effects of biology such as inherited genes. Students also wanted to learn more procedures for accessing medical assistance because teachers ‘didn’t talk about how to get health care.’

**Theme 2: communication and teaching styles**

Students criticized what they felt was the passive role they were routinely asked to adopt in their health education classroom. They were dismayed by the ‘boring’ and ‘routine’ nature of classes ‘listening and, like, copying questions or answering questions.’ As one student recounted: ‘All you’re doing is basically taking from one thing and just putting it on the other piece of paper.’ Another student agreed: ‘They made us copy it right out of ... the [textbook].’

Students wanted ‘more hands on’ approaches and opportunities for active learning, rather than merely ‘teacher talk.’ In fact, students wanted to participate in health related conversations – ‘we need to talk and discuss it between us.’

Because of the passive nature of their involvement in the class, students were not given many opportunities to develop health literacy such as the ability to comprehend and evaluate. One student in particular noted that: ‘we’ve done worksheets, [but] I don’t think there is a lot of understanding and being able to evaluate these topics ... ’ One student suggested that a unit on ‘health literacy and how to understand’ would be a useful course addition. However, when asked to rank their health literacy, many students believed they were already very competent, but expressed doubts about others: ‘I rate myself quite high in this category, because I can find, understand, evaluate, and communicate ... but I think, ah, maybe, ah, certain peers wouldn’t be able to.’

Most of the students’ in-class experiences encouraged dependency on their teachers rather than the opportunity to find their own information and thus developing health literacy. Teachers identified websites with health information that the students could then read. Information was also provided through ‘brochures or whatever around the school’ that students could choose to use. In some schools they could also attend mandatory presentations from guest speakers on, for instance, ‘crystal meth, which I’ve never heard of.’

Providing health information, while an important component for some students, was not taught to give students the health literacy skills to search further on their own.

Other students were quick to suggest pedagogical approaches that they felt would work more effectively. These approaches included a desire to have ‘more input in what they learned ... and speakers based on that,’ and better organization such as offering all the health material together in units, rather than mixed in with other Planning 10 topics.

These sentiments were echoed by others who commented that ‘it’s a lot of reading and typing and writing and that’s boring. It’s really, really boring.’ Instead, students suggested opportunities to ‘live like a hobo for a week,’ have ‘more group work,’ ‘having a few people come in, like public health nurse,’ and use ‘media’ and ‘videos.’ Finally, some students were impressed with shock tactics such as those provided by ‘photos of, like genital herpes and stuff ... wow, as it ... has an impact on you ... and how you really wanna avoid that,’ and wanting to ‘bring in people with syphilis to, like, scare us’.

Along with criticism of the traditional one-way transmission of material, students were very pointed in their views of teachers. One opined, ‘I think it might help if the teachers were qualified [for] the job,’ that is, students believed that teachers do not have the health background to be teaching the health module. Teachers were perceived as reluctant instructors: ‘our teacher doesn’t necessarily want to be teaching us this moment ... he doesn’t think that the course is very informative in any way’. One student said in defense of Planning 10 teachers: ‘It’s hard to make it interesting, basically.’
Students in the focus group realized quickly that their experiences differed from one another, saying ‘it depends on whose class it is.’ One student said ‘We learned a whole bunch,’ and another focus group member responded ‘[I] think you’re lucky.’ Communication of health information, another health literacy skill, between students themselves was likewise not a common activity, and the aspect most heavily criticized by students. Students found the classes were too often dominated by activities in which they were mostly passive, such as receiving information, though some admitted ‘It’s always good to listen to your teacher.’

**Theme 3: sources of health information beyond the classroom**

Although some students expressed appreciation for the information on health gained from their health education classes (‘I think it’s very helpful’), many also spoke about other sources of information that influenced their health literacy including friends and family, school clubs, coaches, nutritionists, trainers, doctors and the media. Friends and family were praised for their modeling ‘my mom’ll cook … she watches my family’s, like, health and stuff like that, so I kind of learn from her.’ One student observed that ‘I’ve been around my parents so long, so I just trust them to make health decisions for me … and [my] doctor, he’s a professional, so I’m pretty sure he would know what he’s talking about.’ One commented that ‘no matter how you change or what you do … your family should always be there for you and most of the time they are.’ Others disagreed, however: ‘My mom would say, ‘oh this is what I did,’ but it’s obvious times have changed since she’s gone to school. There’s a lot more drugs, there’s a lot more people having sex.’

One student commented that she was in the ‘environment club, and … when I went to the club, like everybody’s eating healthy and look[ing] really active … so it makes me want to be more healthy.’ Others cited coaches ‘my hockey coach, he would say to get bigger, eat more red meat,’ as well as the media ‘I don’t feel that I’m myself affected by publications by the media, though I’m probably subconsciously affected.’ One girl said ‘I’ve noticed I have a poster on my wall, a collage of Victoria’s Secret models and it has on the side ‘my dream goal for summer’!’ Another student reported that ‘Planning [10]’s pretty boring … I definitely learn more from the media.’

Not all influences were positive ones nor offered consistent messaging. One adolescent shared a story about his parents who said ‘get some chips, they’re on sale’ when he wanted strawberries. Another commented that the media presents confusing messages such as making ‘chips and stuff look good and then at the next minute, [there’s an ad saying] “Drink Milk.”’

**Discussion**

How effectively and in what ways does the health component of BC’s Planning 10 curriculum contribute to grade 10 students’ health literacy? In other words, how does it affect their capacity to find, understand, evaluate and communicate health information during their course experience?

There are clearly a number of challenges with the health curriculum both in content and presentation, according to the students in these focus groups. Although the four topics of the curriculum received support, adolescents may be more attracted to the activity of decision-making and relationship building, rather than the more static topics of healthy living and health information. This is certainly not to say that students did not still need information, as clearly they did. Adolescents want to have choices and to be actively involved rather than just receive material from a teacher.

The quality of instruction was generally criticized but there were no noticeable differences in the student comments at the piloting schools, which had one more year of experience, versus the non-piloting schools. In defense of the teachers, this curriculum was new. Also, we have long known that teacher training for adequate delivery of health education is essential for its effectiveness (20), and many Planning 10 teachers do not have specific health education training.

There seems to be a difficulty with sequencing and ensuring adequate coverage of topics. Teachers were criticized for offering vague, overly generalized, broad sketches of topics when students wanted specific, even individualized, information. Further, students felt that they were not offered enough chances to be involved in their lessons. Too many classes were based on reading textbooks and answering questions or listening to teacher lectures. Students wanted chances to talk about their opinions, to do ‘hands on’ projects, see more films and expert presenters and seek their own answers to their own health questions.
Do influences in the larger school, community and societal contexts affect how adolescents experience health education? If so, in what ways and to what extent do they do so? Results indicate that factors beyond the individual context do indeed have an influence on how adolescents experience health education. Friends, family, fellow club or team members and the media provide powerful models of health behaviours to adolescents. Compared to teachers, all these sources of influence were judged by students to be more central to their lives. Parents, coaches and friends were felt to be more interested in the student as an individual and not just as a member of a class, or part of a teaching job. They provided advice on, for example, nutrition and exercise that was viewed by students as mostly positive.

Students acknowledged the media as a powerful and effective persuader, but also as a neutral provider of health information. Ironically perhaps, many students believed they could take or leave media messages and make independent choices. Although some were aware of the significant ways that the commercial media sought to influence them, many others believed media to be a helpful force.

Although students acknowledged the importance of health education in general, this attempt at health education, in particular the development of health literacy skills was judged by students in these focus groups as not generally effective.

**Recommendations for practitioners and policy makers**

Teachers and developers of health education for adolescents, whether in schools or in other health venues such as community agencies, clinics, or hospitals, might take several lessons from our investigation:

1. **Courses need to be clearly sequenced to avoid needless repetition on the one hand and missed topics on the other hand.** Surveying students for current understandings can help instructors to make decisions on topics to emphasize and those that can be given less time.

2. **Educators need time and opportunities to acquire appropriate health education backgrounds and this training needs to be supported at the Ministry, school district and school levels.** In addition, teachers need to seek other health experts to handle specific topics, for example school nurses whose presence has greatly declined in BC schools. The classroom teacher might then be in charge of developing learning materials appropriate for students. Likewise, in clinical settings, instructors who may have knowledge but lack pedagogical approaches might seek help from teachers in the schools.

3. **Lessons for adolescents need to offer choice in materials, learning activities and ways to present knowledge, and active ways to pursue and construct knowledge** (21). Large topics such as ‘road safety’ could be introduced in general then students could individually or in small groups investigate topics of interest which could then be shared with others in student produced web sites, brochures, or public talks for example. Individuals also need the opportunity to pursue topics of interest.

4. **Health literacy development needs specific attention in the health education context.** Teaching students how to access, understand, evaluate and communicate health information allows them to become more independent. Such abilities will allow them to cope in the future once they no longer have access to health information in health classes.

5. **Student voices need to be heard.** In-class responses to topics and approaches, while daunting for some instructors, can help students to contribute to their own learning and take responsibility with the teacher for classroom success. Students need to talk about ideas especially with knowledgeable, caring adults.

6. **Parents are still very important in the lives of grade 10 students.** Teachers would do well to call on them during the process of delivering a new curriculum, especially in health education, which is of such great importance to family life. Parents input and assistance could be sought through groups such as BC’s Parent Advisory Councils, which are in every public school.

7. **Teachers should take advantage of the significance of peers and other adults on the health education of students.** Friends and coaches can provide valuable audiences for student sharing of new health knowledge, thus reinforcing the communication of health information. A more integrated approach to health literacy and health education in the high school could result in more consistent messages for students as they encountered other instructors during the school day.
8. The media now has a major impact on adolescent health education. Examining and even creating advertisements is an important way for students to practice health literacy skills such as evaluating and communicating health messages. In addition, students need to develop critical media literacy skills to become more aware of the influence the commercial media exerts on their health behaviours.

Conclusion

This work has confirmed the utility of a social-ecological and social constructivist framework to generate a theoretical understanding of the influence of health education on health literacy. Health education has been defined as ‘the continuum of learning, which enables people, as individuals, and as members of social structures, to voluntarily make decisions, modify behaviors and change social conditions in ways that are health enhancing’ (22, p. 105). We recognize that health education is a necessary component of behaviour change, but is insufficient without resources and supportive environments to facilitate change. However, without health literacy, meaningful opportunities to learn how to access, understand, evaluate and communicate health information, the importance of the contextual and more distal layers of influence may be muted. Students articulated for themselves the importance of the outside sources of health information, frequently admitting that they relied more on these rather than their disappointing and inadequate classroom experiences in health education. Based on these findings, the Planning 10 health curriculum has much work to do in advancing health literacy.

The Planning 10 curriculum continues in British Columbia. We are now tracking the grade 10 students from this investigation as they develop their health literacy in grades 11 and 12 where there are no courses to guide them. We are, however, aware that health education continues in the form of influences from other school and community programs, family, friends and the media. Despite the various perceived failings of the health module, we also suspect that there may be residual effects on students as they progress through grades 11 and 12. Clearly adolescent health education and its development of health literacy is an important topic for further investigation. Learning new approaches to education is one way we might have a positive influence on health behaviours.

References