

Teachers' persuasion to modify health behaviors among students of Bagmati Province, Nepal

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ABSTRACT

Teachers encounter many of the unhealthier behaviors of students that need their support in improving such behaviors. Teachers employ various techniques including instruction, persuasion, and demonstration. They are role models to their students because they present opportunities for observational learning. Teachers can consciously attempt to influence students to change through persuasion. This cross-sectional descriptive survey of 344 teachers in 46 secondary schools aimed to identify the type of health degrading behaviors of the students modified by the teachers and the actions taken in modifying such behaviors, particularly including health persuasion. Teachers were found to involve in the act of persuasion, however, their action was mostly moving around the 'instruction' and 'advise' as the tools for modifying the student's health deteriorating behaviors. More effective persuasive techniques such as demonstrating healthy behaviors by the teachers are necessary to bring evident change.

Keywords: Behavior change, health persuasion, Nepal, observational learning, teacher

Introduction

School teachers do a variety of things to help bring improvement in students' behaviors. They may use persuasion in many ways to bring modification in the health behaviors of the students. Perloff (2003) defines persuasion as a "basic cognitive process where communicators attempt to assure people to vary their attitudes or activities regarding a problem through the transmission of a message, in an environment of free choice" (p.8).

Teachers are fountains of experience. They have already been where their students are going, undergone what they're going to undergo, and are in a position to pass along lessons, not only regarding the topic matter but lessons on life (Teachers are role models, n.d.). They often are the role models for students who are in touch with them for around 6 to 8 hours every day. Students observe their teachers' health behavior every day and are directly influenced. Students can be interested in getting deeper into teachers' deeds to know them. One of their areas of interest is

health-related aspects which may, later on, develop into a healthy attitude and appropriate changes in behavior if they perceive their teacher as a healthy role model.

Beattie (1991) (as cited in Naidoo & Wills, 2009) offers a structural analysis of the health promotion catalog of approaches. Beattie's typology identifies four strategies for health promotion (Naidoo & Wills, 2009) one of which is health persuasion.

Health persuasion is the intervention directed to individuals and led by professionals (Naidoo and Wills, 2009). Persuasion works by appealing to a limited set of deeply rooted human drives and needs that leads people to change (Echols, 2017). An example is a teacher in school consciously attempting to influence students to stop substance abuse, bullying, self-harm behaviors, or over-eating. An ideal teacher not only gives mere information but also continues to support a prolonged period for modifying the health deteriorating behaviors of his/her students.

Besides, health persuasion, Beattie's model explained legislative action, personal counseling, and community development as other strategies. Each of the strategies corresponds to a different political perspective. Conservative reformist perspectives see health promotion as attempting to correct or repair what is seen as a shortage in the conservative perspective, or an aspect of deprivation in the reformist perspective. These perspectives give rise to authoritative and prescriptive approaches. Libertarian and radical perspectives both see health promotion as seeking to empower individuals. The radical perspective also seeks to mobilize and liberate communities. Each of these perspectives also directs the practitioner (here the teacher) in a different role to clients (here students).

Beattie's model may be a useful one for health promoters because it identifies a transparent framework for deciding a technique, and yet reminds them that the selection of those interventions is influenced by social and political perspectives. There are some deficiencies of the Beattie Health Promotion Model. Although this model deals with information, education, legislation, psychological and social factors as strategies in achieving health, health has several other dimensions not considered including physical, mental, spiritual, and environmental that are essential for total health and well-being.

The first strategy of this model 'health persuasion' is studied in this research as an approach used by teachers to change unhealthy behaviors of their students, based on the assumption that teachers can persuade their students to drop harmful behavior and adopt healthy ones. To persuade, the teachers are expected to demonstrate healthy behavior themselves and continue inspiring their students. This study aims to identify (a) the types of unhealthy behaviors of the students modified by the teachers, and (b) what actions particularly including health persuasion are taken by the teachers in modifying such behaviors.

Materials and methods

A cross-sectional survey design was applied including a mixed-methods approach (Creswell, 2013), comprising a questionnaire study with secondary-school teachers and interviews with students at the same schools. Health role modeling can be related to all levels of teachers and students but this research was delimited to the secondary level students and teachers. A multistage method of sampling was used in the selection of the province (Bagmati), districts (Rasuwa, Bhaktapur, and Chitwan), schools, and teachers. Both purposive and random methods were used in various stages of sampling. As for the selection of sample schools, a proportionate simple random sampling procedure was followed from the list of schools in the part of each

district. A total of 46 schools was sampled from the three districts. As for the selection of the sample teachers, a total sampling technique was applied within the sampled schools. A questionnaire was distributed to all available teachers at the secondary level of the sampled schools, thus teachers representing all secondary-school topics. Altogether 414 questionnaires were distributed to 46 schools of the three districts however, a total of 344 teachers returned the questionnaires (with a response rate of 83.09%) from the schools. For the qualitative data, 30 students were chosen from different schools based on a short interview to elicit whether any change in their health behavior followed their teachers' engagement.

Table 1: *Population and sample size of teachers and schools*

Districts	Teachers				Schools			
	Total	% of total	Proportionate sample size	Final sample size	Total	% of total	Proportionate sample size	Final sample size
Rasuwa (Mountain)	52	3.3	10	17	15	4.5	2	4
Bhaktapur (Hill)	946	58.7	182	201	154	46.4	20	20
Chitwan (Terai)	613	38	118	126	163	49.1	22	22
Total	1611	100	310	344	332	100	44	46

Questionnaires for teachers and in-depth interview guidelines for students were used as the tools. Quantitative data were analyzed using descriptive statistics including averages, chi-squared test, and cross-tabulations. Statistical significance was set at $p < 0.05$. The in-depth interviews were recorded and thematically analyzed. The researcher reviewed and explored the information by reading them frequently, created initial codes and making notes (Given (Ed.), 2008), which were again revised and combined into themes based on the literature review, word repetition and keywords of the context (Ryan and Bernard, n.d.). Relevant quotes were presented to maintain the themes without any personal influence of the researcher. Interpretations were made in an analytic and interpretative way. Ethical approval was taken from the Research Committee of the Dean's Office, Faculty of Education, Tribhuvan University.

Results

Modifying unhealthy behaviors of the students

Besides regarding teaching and study as their main motto with the objective of making students good citizens, teachers' role is to encourage obedience, discipline, goodwill, cooperation, virtue, empathy, patience and integrity among the students (Ministry of Law and Justice, 2016). Teachers are also involved in correcting educational and behavioral problems of the students besides facilitating in the classroom. Although it is not mandatory to inspect and supervise the students regarding their health, good teacher involves themselves in this. This study also sought insights on whether the teachers carefully inspect and supervise the students' behaviors, and identify their health deteriorating behaviors. Those identified health-compromising behaviors are expected to be corrected by the teachers through different ways. It was tried to know whether the teachers had any experience of modifying unhealthy behaviors of the students.

Table 2: *Modifying health degrading behavior of the students by the teachers*

		Teachers' experience of modifying the health-degrading behavior of the students				Chi-square P-value
		Yes		No		
		N	%	N	%	
District	Rasuwa	10	58.8	7	41.2	0.367
	Chitwan	75	59.5	51	40.5	
	Bhaktapur	104	51.7	97	48.3	
Sex	Male	131	52.8	117	47.2	0.204
	Female	58	60.4	38	39.6	
Age group	Less than 24	27	56.3	21	43.8	0.023
	25 to 29	39	41.5	55	58.5	
	30 to 34	37	52.1	34	47.9	
	35 to 39	37	68.5	17	31.5	
	40 to 44	20	57.1	15	42.9	
	45 to 49	14	66.7	7	33.3	
	50 and over	15	71.4	6	28.6	
Teaching subject	Health Related	24	61.5	15	38.5	0.450
	Natural Science	55	49.5	56	50.5	
	Social Science	32	64.0	18	36.0	
	Language	55	53.9	47	46.1	
	Other	23	54.8	19	45.2	
Type of school	Community	37	60.7	24	39.3	0.233
	Institutional	152	53.7	131	46.3	
	Total	189	54.9	155	45.1	

Table 2 shows that overall 54.9 percent of teachers corrected some unhealthy behaviors of their students while 45.1 percent did not. More female teachers performed this task than males. Regarding age, the higher the age more the cases of modification of unhealthier health. More than 60 percent of social science and health-related teachers modified unhealthier behaviors of their students, a higher proportion that found among natural science and language teachers.

Statistically, teachers' experiences of modifying the health degrading behavior of the students seem to be related to the age group ($P=0.023$) of the respondents. Higher the age of the teachers, persuasion was more. There was found no significant difference in this due to the district, sex, teaching subject or the type of school of the respondents. However, a huge number of teachers in each category were involved in this behavior.

Types of the unhealthy behaviors modified in the students

Teachers who said themselves involved in modifying any of the unhealthy behaviors of the students were again asked about the type of behaviors of the students that were modified with their intervention. Regarding the types of unhealthy behaviors of the students which the teachers claimed to attempt to modify, a total of 26 different unhealthy behaviors of the students were identified.

Table 3: *Type of students' unhealthier behaviors modified by the teachers*

Types of behaviors modified	Responses		Percent of cases
	N	%	
Substance abuse	64	25.5	40.3
Taking junk foods	36	14.3	22.6
Not paying attention to personal cleanliness	35	13.9	22.0
Consuming unclean foods	14	5.6	8.8
Eating without handwashing	13	5.2	8.2
Inactivity	12	4.8	7.5
Untimely intake of food	10	4.0	6.3
Not trimming nails	10	4.0	6.3
Wearing dirty clothes	7	2.8	4.4
Consuming stale food and dirty water	7	2.8	4.4
Not drinking enough water	6	2.4	3.8
Nail biting	5	2.0	3.1
Not brushing teeth	5	2.0	3.1
Not seeking treatment during illness	5	2.0	3.1
Not oiling hair	3	1.2	1.9
Under-eating	3	1.2	1.9
Carelessness	3	1.2	1.9
Not trimming hair	2	0.8	1.3
Being hostile/angry	2	0.8	1.3
Negativity	2	0.8	1.3
Bad company	2	0.8	1.3
Not combing hair	1	0.4	0.6
Over-eating	1	0.4	0.6
Unsafe sexual behavior	1	0.4	0.6
Rubbing eyes	1	0.4	0.6
Stressed	1	0.4	0.6
Total	251	100.0	157.9

*Multiple responses

Interestingly, a large number of teachers (40.3%) were involved in modifying the substance misuse behaviors of the students. This also shows that there existed tobacco, alcohol, drugs, or other substance-consuming behaviors among students in the schools. A total of 22.6 percent of teachers corrected the junk food-taking behaviors of the students and 22 percent of teachers made the students pay attention to personal cleanliness.

Instruction as a major method to bring change in the students

Usually, teachers take indicative methods to address the behavioral problems of the students. The teachers in this study were found using instruction as a major method among the 12 methods to change the students' health deteriorating behaviors after identification of it.

Table 4: *Actions taken by the teachers to modify unhealthier behaviors of the students*

Action for changing behavior	Responses		Percent of Cases
	N	%	
Instructing	53	29.9	37.1
Giving appropriate advice	25	14.1	17.5
Giving examples of negative effects	21	11.9	14.7
Continuous follow up	18	10.2	12.6
Providing examples from subject matter	10	5.6	7.0
Being friendly and facilitate	10	5.6	7.0
Making both parents and students aware	9	5.1	6.3
Giving examples of healthy people in society	8	4.5	5.6
Demonstrating healthy acts	8	4.5	5.6
Explaining the causes of illness and prevention	7	4.0	4.9
Organizational support	6	3.4	4.2
Requested to avoid substance abuse	2	1.1	1.4
Total	177	100.0	123.8

*Multiple responses

Although instruction (37.1%) was the major method of correcting the unhealthy behaviors of the students, some other teachers tried to correct the students' behaviors by giving appropriate advice and giving examples of negative effects of the particular behavior. Some other effective measures were also used like continuous follow-up (12.6%) and providing organizational supports (4.2%) to the students. A few teachers (6.3%) made both the parents and students aware of the process of correcting students' behaviors. However, only 5.6 percent of teachers said they modified their students' unhealthy behavior by demonstrating healthy acts for them. Teachers are often described as health role models but in practice, this didn't seem to be the case.

Likewise, the qualitative research comprising 30 interviews with students showed several themes or issues. One of the students in Chitwan in an in-depth study told how his smoking behavior was changed:

"I was damaged by the bad company until my teacher identified the root cause and presented himself as a mentor in front of me. He tried to convince me to leave my bad company and change my habit of smoking. I initially felt indifferent towards him. Later on, I started to investigate his behavior. Then I came to know that the teacher himself never had unhealthy habits. He gave me an example of how he attempted to smoke cigarettes in his adolescence and how he avoided his bad company. I was very convinced by his self-story which helped me to develop courage and leave the bad company. I eventually stopped smoking." (a boy in the in-depth study, Chitwan)

On the other hand, a student from Chitwan shared his views towards his role model teacher as follows:

"The Health Education teacher in my school is a role model for me. Though the school lacked even first aid materials too, the teacher is very healthy, conscious and provides us useful health-related information. He is a role model because

he picks the wastes from the ground. This inspires us. I believe one must be healthy first to teach well like my health education teacher." (a boy in the in-depth study, Chitwan)

Another student from Bhaktapur reported as follows:

"For me, an optional mathematics teacher is the role model. I have changed myself a lot after seeing him. I used to be ill and study poorly earlier. But his health, good manner, and guidance changed me. He pays attention to all the students. I have learned from him that we should take care of our bodies. I have started exercising in the morning too. I have improved a lot in my health." (a girl in the in-depth study, Bhaktapur).

The in-depth study sheds light on the importance of teachers' behaviors. The study found that the boy who was smoking did not readily change his compromising behavior until he found his teacher healthy. It shows that the advice is accepted and implemented by the students after careful investigation of the advisor's behaviors. One is not changed by words but by the deeds of the advice-giver.

Discussion

The sample teachers knowingly or unknowingly used some persuasion techniques for molding and shaping the attitudes and behaviors of the student. About 55% of teachers felt that they were modifying the health deteriorating behaviors of the students. 'Demonstrating healthy acts' was found less (5.6%) as an action the teachers took in modifying students' health deteriorating behaviors. But this was the fascinating one found from the in-depth study of students. This method can work if appropriately conducted by the teachers. Sampath, Panneerselvam, and Santhanam (2007) remind that their research showed the following figures in the context of learning by the students: we learn, 1% through taste, 1.5% through touch, 3.5% through smell, 11% through hearing, and 83% through sight. The above figure identifies the superiority of 'sight' as more than 80% of the experiences we gain in this world are received through this particular sense. If teachers set themselves as role models for health, students will learn to follow them as examples.

According to Green and Tones (2010), the adoption of a particular behavior is encapsulated in the 'K-A-P' formula; Knowledge, Attitude and Practice. It asserts that knowledge alone does not lead to behavioral change (=practice); it is usually necessary but rarely sufficient. Green and Tones (ibid) further say, "the provision of knowledge has to be supplemented by the persuasive techniques designed to bring about a change in attitudes before the target person will adopt appropriate practices" (p. 118).

Echols (2017) says that persuasion is a behavior change method that involves a purposeful attempt to impact an individual's course of action through communication. It also attempts to sway a person's opinion by presenting a compelling case in a way that motivates the person to change their behavior. It is functioning effectively within healthcare with a particular focus on persuasive communication theory in public health (Rossi & Yudell, 2012). "Health communicators have launched numerous campaigns to vary people's rational about cigarettes, alcohol, drugs, and unsafe sex" (Perloff, 2003, p. 4).

Physically and mentally healthy staff are more likely to be energetic, enthusiastic, and effective teachers and serve as good role models for students. Children learn primarily by the examples

set for them. Therefore, many parents want positive, healthy role models in the schools. As faculty and staff work to achieve high-level wellness, the students may model these behaviors (Cox & Billingsley, 1996). Santrock (2006) stated: "Children might attend to a model and code in memory what they have seen but, because of limitations in their motor ability, not be able to reproduce the model's behavior" (p.228). Teaching, coaching, and practice can help students improve their motor performances (Santrock, *ibid*). But this happens only after students observe their teacher's behaviors.

Teachers can persuade students through role-modeling. It is the process of the teacher assisting the student in the attainment and maintenance of their skills and knowledge and career promotions through meaningful interventions and leading by examples (Schultz, 2013). The idea is to learn from the teacher's mistakes and avoid repeating them. The teacher can share knowledge and information with the students. Examples can be set up on health behavior too.

Conclusion

Health persuasion is one of the four strategies for health promotion as per Beattie's health promotion model. If a teacher persuades their student to modify health behaviors, a chance of change is possible. It's more than informing about health. This paper found that teachers had a feeling that they were modifying the health deteriorating behaviors of the students. However, in reality, most of the actions were not related to the students' persuasion for health behavior change. Teachers' experiences of modifying the unhealthy behaviors of the students were found significantly related to the age group of the teachers. Higher the age of the teachers, persuasion was more. Substance abuse behavior was found the most modified by the teacher's engagement in the student's affairs. Most of the teachers took the instruction and advice as the tools for modifying those behaviors. Only a small portion of teachers demonstrated healthy acts for the students to modify their unhealthy behaviors. Findings from in-depth interviews with the students reveal that the students do not readily change their behavior by hearing advice from their teachers; instead, if the teachers themselves show expected behaviors, students follow.

Therefore, teachers must use persuasive techniques to improve the students' health behaviors. Just telling or instructing is not sufficient. Demonstrating healthy acts must be used for health persuasion by the teachers.

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