

Health Promotion Modeling Practices among School Teachers in Nepal

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ABSTRACT

Modeling enhances client understanding by creating a visual representation of their world, promoting facilitation, nurturing, and unconditional acceptance within their framework and perspective. The study investigates secondary-level teachers' practice of modeling skills in classrooms for student health promotion, focusing on Nepalese schools and considering the modeling constructs from the "modeling and role modeling theory." The study utilized a cross-sectional survey design with a descriptive quantitative approach, involving questionnaires distributed to secondary school teachers in three districts, Chitwan, Bhaktapur, and Rasuwa in 2018. Of the 1611 teachers, a total of 414 teachers were reached out for the self-administered structured questionnaire. The final sample size was 344 teachers with a response rate of 83.09%. The tool was made inclusive, evaluated for face validity, and maintained confidentiality and anonymity during data collection and presentation. The data were analyzed using descriptive statistics and statistical significance was set at $p < 0.05$. The study found that teachers performed three categories of modeling for students' health: facilitation, nurturance, and unconditional acceptance. Those activities helped teachers understand their students' perspectives and realize their health situation. However, only 6.1% of teachers provided healthy experiences, 11.5% cared for students' health needs, and 34% performed unconditional acceptance. Persuasive techniques like facilitation, nurturance, and unconditional acceptance are crucial for strengthening persuasion and encouraging appropriate behaviors among the students. Authorities should conduct refresher training for teachers to promote these skills, as they are not reflected in real classroom situations. Further research is recommended to understand the causes of this discrepancy.

1. INTRODUCTION

Roles are specific behavior patterns attributed to a social unit (Robbins, 2003)

such as teachers in schools. Teachers are expected to perform certain roles, and if they can influence positive or negative

aspects of students through their personality, speech, and actions, they are considered role models. Bandura's social cognitive theory (SCT) suggests that exposure to positive role models can change students' attitudes (Santrock, 2006). Modeling involves understanding others' perspectives and ideas while leaving one's own values.

Modeling is the act of imitating a standard or representation of something, based on one's own experiences and perspectives (Erickson et al., 1983). Similarly, it is the process of creating a realistic representation of a situation from the client's perspective (Erickson, 2018). It is used to develop an image and understanding of the client's world, within their framework and from their perspective, enhancing their understanding. It focuses on fostering facilitation, nurturing, and unconditional acceptance as its main constructs (Erickson et al., 2006).

This study adopted the modeling concept from the modeling and role modeling theory. This theory empowers nurses to treat patients with kindness and compassion, acknowledging and appreciating their uniqueness. It outlines three nurse roles: facilitation, nurturance, and unconditional acceptance, where facilitation involves providing resources and information, nurturance involves care and comfort, and unconditional acceptance allows nurses to accept patients as they are without any conditions (Erickson et al., 1983). For this study, facilitation is a teacher's role in guiding students toward desired outcomes (Schultz, 2004) such as gaining experience through networking or making contacts.

Nurturance, on the other hand, as per modeling and role modeling theory, is a holistic approach that combines cognitive, physiological, and affective processes to assist clients in achieving holistic health, focusing on understanding their personal worldview and its significance (Erickson et al., 1983). Nurturance requires the teacher to understand and support the student's values (Schultz, 2004). It involves the teacher guiding a student towards desired

outcomes by understanding their values and desires. They feed and care for the student's needs, similar to a parent nurturing child.

As per the modeling and role-modeling theory, unconditional acceptance of oneself is crucial for personal growth and adaptive equilibrium, as it allows for the mobilization of necessary resources (Erickson et al., 1983). Unconditional acceptance fosters understanding and an open atmosphere, promoting empathetic communication, tolerance, and nonjudgmental respect (Schultz, 2004). This approach contrasts with traditional teacher roles that involve critical judgments and grading, fostering a more positive learning environment and promoting a more inclusive learning environment.

The study's significance lies in its connection to teachers' role as role models for students' health and learning, serving as a guideline for schools to initiate and implement modeling in the school setting for student health promotion. The student sees the world with the teacher's eyes if the teacher carefully creates the opportunity for observational learning. Teachers are expected to be healthy and influence positive health among students. Therefore, this study aimed to find out how the teachers in Nepal at the secondary level practice modeling skills in the classroom for the promotion of students' health. The constructs of the modeling part from the modeling and role modeling theory were taken into consideration for the understanding of the situation in Nepalese schools. The null hypothesis of the study was that the health promotion modeling skills (facilitation, nurturance, and unconditional acceptance) of the teachers are not related to the sex, age group, teaching subject, type of school, and geographical location of the teachers.

The study was delimited to the health promotion of teachers in Nepal and their role-modeling behavior in three districts of Bagmati province. Variables included sex, age, teaching subject, type of school, and geographical location. The research analyzed the perceived health

behavior of teachers and secondary-level students, highlighting the importance of health role modeling in education. It was limited to secondary-level students and teachers only.

2. METHODS

The study used a cross-sectional survey design with a descriptive quantitative approach, including questionnaires for secondary school teachers. A multistage sampling method was used, including purposive and random methods, in the selection of the province (Bagmati), districts (Rasuwa, Bhaktapur, and Chitwan), schools, and teachers. The sample schools were selected from a list of schools in each district using a proportionate simple random sampling

procedure. A total sampling technique was used to select teachers from 46 schools in three districts. A self-administered structured questionnaire was distributed to all secondary-level teachers of the selected schools, representing all secondary school subjects. As shown in Table 1, the population of the study was 1611 secondary-level teachers from 332 secondary schools. A proportionate sample size of 310 was identified, however, the questionnaires were distributed to 414 teachers as per their availability in the schools. Finally, 344 teachers returned the questionnaires, with a response rate of 83.09%, therefore, it was the final sample size.

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

During the data collection, teachers were informed about the research's aims, advantages, and potential hazards. The tool was inclusive and evaluated for face validity by Tribhuvan University professors. Respondents were treated equally, and verbal consent was obtained before tool administration. Confidentiality and anonymity were maintained, and respect was given to both males and females. Quantitative data were analyzed using descriptive statistics including averages, chi-squared tests, and cross-tabulations. Statistical significance was set at $p < 0.05$.

3. RESULTS

3.1 FACILITATION FOR HEALTH OF STUDENTS

Teachers are assigned to teach their respective subjects. Besides teaching their formal courses, they can be involved in facilitating students to develop many positive characteristics. Among such characteristics, good health is also one. Facilitation is the role of the teacher in which the teacher moves the students towards the desired outcomes of good health. The teachers were asked besides formal teachings in class whether they were involved in facilitating students in achieving good health.

Table 2: Facilitation by Teachers for the Good Health of Students

		Besides formal teachings in class, teachers are involved in facilitating students in achieving good health			
		Yes		No	
		N	%	N	%
Sex	Male	191	77.0	57	23.0
	Female	77	80.2	19	19.8
Age group	Less than 24	36	75.0	12	25.0
	25 to 29	68	72.3	26	27.7
	30 to 34	60	84.5	11	15.5
	35 to 39	43	79.6	11	20.4
	40 to 44	26	74.3	9	25.7
	45 to 49	21	100.0	0	0.0
	50 and more	14	66.7	7	33.3
Teaching subject	Health Related	34	87.2	5	12.8
	Natural Science	85	76.6	26	23.4
	Social Science	43	86.0	7	14.0
	Language	80	78.4	22	21.6
	Other	26	61.9	16	38.1
Type of school	Community	48	78.7	13	21.3
	Institutional	220	77.7	63	22.3
District	Rasuwa	14	82.4	3	17.6
	Chitwan	117	92.9	9	7.1
	Bhaktapur	137	68.2	64	31.8
Total		268	77.9	76	22.1

It was found that 77.9 percent of teachers in total confirmed to model for good health through facilitation skills. This facilitation was found to be the highest in Terai (about 93%) and the least in Hill (68.2%).

There was no fixed pattern of relationship in the determination of facilitation for health by age and sex. Cent percent of teachers of 45 to 49 years

practiced facilitation for health but it was the lowest among the teachers above 50 years (two-thirds). Moreover, 87.2 percent of health-related teachers said they were involved in facilitating students to achieve good health frequently. Statistically, facilitating for good health of students by the teachers was significantly related to the teaching subject and district of the respondents.

Table 3: Facilitation by Teachers: Pearson Chi-Square Tests

		Facilitation to students in achieving good health	
Teaching subject	Chi-square	10.230	
	df	4	
	Sig.	0.037	
District	Chi-square	27.653	
	df	2	
	Sig.	0.000	

In this question, a good situation (77.9 %) of facilitation for health by the Nepalese teachers was found, however, in the next question it was proved wrong. The teachers were further asked about the type of methods they used in facilitation for the good health of students. This inquiry revealed the following answers:

4: Methods of Facilitation by the Teachers for Good Health of Students

Methods of facilitation	Responses		Percent of Cases
	N	%	
Providing students with healthy experiences	14	5.8	6.1
Making contacts or networking on behalf of students	4	1.7	1.8
Directing students to good health	10	4.1	4.4
Advising on health matters	44	18.3	19.3
Advising for lifestyle change	21	8.7	9.2
Educating on health matters	89	36.9	39.0
Providing exemplary works on health	11	4.6	4.8
Presenting good characteristics for example	7	2.9	3.1
Involving in various games	2	0.8	0.9
Providing examples of the effects of unhealthy habits	5	2.1	2.2
Others	14	5.8	6.1
Organizing meetings, discussions	16	6.6	7.0
Provide moral education	4	1.7	1.8
Total	241	100.0	105.7

*Multiple response

Table 4 shows that a large number of the teachers believed in educating (39%) or advising (19.3%) on health matters as methods of facilitation, which is simply not the facilitation. Facilitating by teachers for health involves 3 major tasks which were found much less in the sample districts – a) providing students with healthy experiences (here 6.1%); b) Making contacts or networking on behalf of students (here 1.8%); and c) directing students to good health (here 4.4%). Thus, in conclusion, it can be said that the facilitation was truly done by 12.3 percent of teachers only (this was in multiple responses, so the correct percentage of teachers may be less).

Earlier it was found that a total of 77.9 percent of teachers practiced facilitation for better health among

students but that was a wrong perception of the teachers that they were doing facilitation for health as their methods were wrong. This shows that they could not perform facilitation skills and only a few (12.3%) were able to perform it correctly.

3.2 NURTURANCE FOR THE HEALTH OF STUDENTS

Teachers are often called foster parents as they nurture the students in the absence of their parents. Nurturance for the student's health is a matter of the will and ability of teachers. The teachers were asked whether they were able to nurture their students to achieve good health as any parent does. The following answers were achieved:

Table 5: Nurturance by Teachers for the Good Health of Students

		Able to nurture students in achieving good health as any parent does			
		Yes		No	
		N	%	N	%
Sex	Male	150	60.5	98	39.5
	Female	70	72.9	26	27.1
Age group	Less than 24	29	60.4	19	39.6
	25 to 29	51	54.3	43	45.7
	30 to 34	46	64.8	25	35.2
	35 to 39	42	77.8	12	22.2
	40 to 44	22	62.9	13	37.1
	45 to 49	17	81.0	4	19.0
	50 and more	13	61.9	8	38.1
	Teaching subject	Health Related	31	79.5	8
Natural Science		62	55.9	49	44.1
Social Science		36	72.0	14	28.0
Language		67	65.7	35	34.3
Other		24	57.1	18	42.9
Type of school	Community	42	68.9	19	31.1
	Institutional	178	62.9	105	37.1
District	Rasuwa	13	76.5	4	23.5
	Chitwan	93	73.8	33	26.2
	Bhaktapur	114	56.7	87	43.3
	Total	220	64.0	124	36.0

As per Table 5, sixty-four percent of teachers in total said they nurture the students for health. The least were found in the Hill region (56.7%) and around three-fourths of such teachers were found in Mountain and Terai. Similarly, by nature, more female teachers (about 73%) were able to nurture students than males (60.5%).

Mostly, teachers of 45 to 49 years (81%) were able to nurture their students as

parents, but there was no remarkable trend, as there was a similar situation for teachers above 50 years and below 29 years. About 80 percent of health health-related teachers were able to foster their children. Statistically, the ability to nurture students to achieve good health by the teachers was significantly related to sex, teaching subject, and district of the teachers.

Table 6: Nurturance by Teachers: Pearson Chi-Square Tests

		Nurturance to students in achieving good health
Sex	Chi-square	4.641
	df	1
	Sig.	0.031
Teaching subject	Chi-square	9.622
	df	4
	Sig.	0.047
District	Chi-square	11.031
	df	2
	Sig.	0.004

Here, the initial 64 percent of teachers who said they were able to nurture their students to achieve good health were again found questionable in the second

question. The teachers were further asked what they used in nurturing their students. This inquiry revealed the following methods of nurturance:

Table 7: Methods of Nurturance by the Teachers for Good Health of Students

Methods of nurturance	Responses		Percent of Cases
	N	%	
Understand student's values of health	7	3.3	3.6
Support student's health-related values	15	7.0	7.8
Care the health needs of students	22	10.3	11.5
Look after students	43	20.2	22.4
Identifying health deviations of students	3	1.4	1.6
Encouraging students to take part in health programs	21	9.9	10.9
Giving examples of health/disease	7	3.3	3.6
Meeting student's parents	3	1.4	1.6
Others	4	1.9	2.1
Preventing students from accidents	1	0.5	0.5
Educating/informing students on health matters	57	26.8	29.7
Preventing students from diseases	6	2.8	3.1
Supervising	24	11.3	12.5
Total	213	100.0	110.9

*Multiple responses

As per Table 7, a large portion of the teachers were supposed to educate or inform students on health matters (29.7%) and looked after students (22.4%) as components of nurturance, which is simply not true. Nurturance for health by teachers involves 3 major tasks which were found to be very less in sample districts – a) understanding student's values to health (here 3.6%); b) supporting student's health-related values (here 7.8%); and c) care the health needs of students (here 11.5%). Thus, in total, only 12.9 percent of teachers were able to nurture their children for good health.

In conclusion, among the 64 percent of teachers, who said they would nurture their students, in reality, were not able to nurture for good health of the students, and hence, were unable to model good health. Only 12.9 percent (this was in multiple

responses, so the correct percentage of teachers may be less) of them carried out the right way of nurturance and can model themselves as a healthy teacher.

3.3 UNCONDITIONAL ACCEPTANCE FOR HEALTH OF STUDENTS

Many teachers do not respect their students. Some teachers critically judge their students. However, a model teacher accepts their student without any thread or condition attached. In this regard, teachers were asked about the level of unconditional acceptance of the health of their students. It was difficult for the teachers to understand first the meaning of unconditional acceptance, so they initially left most of the answers. However, in the second attempt, it was explained to them. Their answers were obtained as follows:

Table 8: Unconditional Acceptance by Teachers for the Good Health of Students

		Able to accept students without any expectation from them to achieve good health			
		Yes		No	
		N	%	N	%
District	Rasuwa	5	29.4	12	70.6
	Chitwan	32	25.4	94	74.6
	Bhaktapur	80	39.8	121	60.2
Total		117	34.0	227	66.0

A total of 66 percent of teachers said that they were unable to provide unconditional acceptance to students. Although the number of teachers who performed unconditional acceptance was a little higher in Bhaktapur (Hill district) than in other districts, its condition was substantially low in all districts.

4. DISCUSSION

The study examines health modeling by Nepali school teachers, focusing on facilitation, nurturance, and unconditional acceptance. It highlights challenges in teachers' practices, stressing the importance of enhanced support and training to bridge the gap between intention and action, ultimately improving student well-being and fostering a good environment for learning.

All three categories of modeling for the health of students by the teachers were found to be performed to a small extent. Since modeling is to gain an understanding of the student's world from the student's perspective by a teacher, the teacher needs to perform three activities for this understanding – facilitation, nurturance, and unconditional acceptance for the health. Practice of these components of modeling helps the teacher to realize the health situation of their students.

Regarding facilitation, although 77.9 percent said they were able to do it, only 6.1 percent of them provided students with healthy experiences. Moreover, regarding nurturance, although 64 percent of teachers said they were able to do so, only 11.5 percent of them cared about the health needs of students. In addition to that, regarding unconditional acceptance,

only 34 percent said they were able to do so. It was not further investigated on the methods used for unconditional acceptance, otherwise, by trend; its status would probably be far lower.

Bandura's SCT highlights the impact of role models on behavior. Teachers, seen as key figures in students' lives, are expected to exemplify healthy habits. However, a study by Manik et al. (2022) found discrepancies between teachers' self-perception and their actual practices.

Role models are individuals who influence others through their admirable qualities. They provide a sense of direction and inspiration, often based on dissatisfaction with oneself, helping individuals feel more positive and capable of achieving their goals. Albert Bandura's Social Learning Theory (SLT) emphasizes cognitive concepts and the role of role models in shaping behavior and development. It incorporates modeling, reciprocal determinism, self-efficacy, and temporal variation in cause and effect. In 1986, Bandura renamed SLT to SCT to distance it from behaviorist approaches (Bandura, 1986). His work has inspired extensive research on learning and behavior.

Teachers serve as role models, teaching through actions and setting an example. SLT suggests students learn behavior by observing and repeating it (Schroeter, 2002). A study by Yancey, Seigel, and McDaniel (2002) found that 56% of Los Angeles County adolescents identified a role model, with higher ethnic identity indicating a preference for known individuals. This association was also linked to higher self-esteem and grades, suggesting that role

model selection is linked to protective psychological traits.

Aryal (2022) revealed both positive and negative effects of observable teacher health behaviors on student health, emphasizing the significance of comprehending student cognition within Albert Bandura's SLT. Regular physical activity is vital for health, especially in regions such as South Asia, where a significant proportion of adults, including teachers, are insufficiently active. A study conducted in Bhaktapur, Nepal examined physical activity levels among teachers using the IPAQ-Long Form. Findings revealed that 11.9% had low physical activity levels, with household work contributing the most to their activity. Gender and workable environment significantly influenced physical activity levels, suggesting that tailored intervention strategies for sedentary populations, such as teachers, are needed to promote healthy lifestyles (Shrestha, et al. 2023). The study emphasizes student-centered learning and acknowledges diverse educator perspectives. It also emphasizes healthcare students' high expectations for simulation-based learning, underlining the need for goal-oriented, self-directed, and individualized approaches to meaningful education (Keskitalo, 2015).

Enhanced teacher-student relationships and reduced mobile phone addiction are linked to better mental health among online undergraduate and graduate students. Mobile phone addiction mediates the relationship between teacher-student rapport and mental disorders, while hometown settings moderate this association, especially for rural students. Recognizing these dynamics is essential for tackling mental health and mobile phone addiction issues in online education (Dong et al., 2024). Illegitimate tasks have an indirect and statistically significant effect on teachers' Organizational Citizenship Behavior (OCB), mediated by negative affectivity. Additionally, the interaction between illegitimate tasks and negative affectivity is amplified by passive leadership, shedding light on the complex dynamics of

organizational stressors and behavior in private school settings (Shaya et al., 2024).

Ranabhat et al. (2024) showed a 13.2% prevalence of physical inactivity among school teachers in Pokhara, Nepal. They identified factors such as sex, ethnicity, educational qualification, walking environment availability, and daily screen time as statistically linked to physical inactivity. Despite this, most participants met WHO global physical activity recommendations, with domestic and garden work playing significant roles in activity levels. Significantly high perception of distributed leadership in Nepali schools, especially among female teachers, those from private schools, and urban settings. Private schools notably influence both the educational environment and achievement levels. Notably, supportive and coherent team leadership within distributed leadership significantly impacts educational achievement, signaling areas for potential school improvement (Khadka et al., 2024).

Teachers significantly influence student behavior and learning, promoting physical activity through active teaching, therefore, enhancing health and fitness knowledge is crucial for pre-school teacher preparation (Cheung, 2020). Student teachers play significant social roles beyond teaching content, emphasizing the need for them to act as change agents and critical thinkers (Izadinia, 2012). Modeling theories, similar to associative theories, suggest that observational learning occurs through the reinforcement of imitative behavior (Bandura, 2021).

A 2-group randomized clinical study in Mashhad, Iran in 2018 discovered that the use of self-care programs grounded in modeling and role-modeling theory might greatly improve patients' perceptions of their bodies concerning colorectal cancer (Khalilabad et al., 2020). A similar study revealed that self-care nurturance can enhance patients' quality of life by providing new living experiences (Ordouni et al., 2023). A comparable research found that applying modeling and role-modeling theory can enhance stroke patients' self-care activities, knowledge, self-efficacy, and

internal and external resources, leading to improved self-care and increased self-reliance (Jeddi et al., 2023).

We found that the modeling components were initially seen to be moderately exercised by the teachers in this study as 77.9% said they used facilitation skills; 64% said they used nurturance skills and 34% said they were able to perform unconditional acceptance skills. However, in further investigation, only 6.1% were found able to actually provide students with a healthy experience (facilitation) and 11.5% cared about the health needs of students (nurturance).

The facilitation component of modeling skills of teachers is not simply educating or advising on health matters, it is rather a process of providing students with healthy experiences, making contacts or networking on behalf of students, and directing them to good health. Many teachers misunderstood teaching health education as facilitating. It is the role of the teacher they move the students toward the intended results (Schultz, 2004).

Nurturance is not simply supervision or looking after the children, it is rather a careful understanding and support of students' health-related values and attention to such values (Schultz, 2004). Many teachers wrongly presume themselves as nurturing teachers only by superficial care of the students. But, in reality, only those teachers who understand students' health-related needs and come forward to assist them in achieving those needs are called nurturing teachers. This shows modeling was exercised below par by teachers in Nepal.

Green and Tones (2010) suggest that knowledge alone isn't enough to lead to behavior; it's often necessary but rarely sufficient. They suggest that persuasive techniques, such as facilitation, nurturance, and unconditional acceptance, are necessary to change attitudes and encourage appropriate practices. These techniques help strengthen persuasion and encourage the adoption of appropriate behaviors. A teacher can model these activities. Many teachers in Nepal aim to be

positive health role models for students, highlighting the necessity for increased support and training to align intentions with actions, enhancing facilitation, nurturance, and acceptance skills to effectively promote and model healthy behaviors, thereby improving student well-being.

5. CONCLUSION

Most teachers in Nepal struggle with modeling healthy behaviors for students due to poor capacity and lack of orientation from health educators. Despite some natural modeling, most teachers have not received proper training in health modeling skills, indicating a need for proper training for teachers in Nepal. Teachers should play a crucial role as role models for students, requiring them to practice facilitation, nurturance, and unconditional acceptance tactfully. Facilitation involves moving students toward desired outcomes, while nurturance involves understanding and supporting students' values. Unconditional acceptance fosters an understanding and open atmosphere, unlike traditional teacher roles that involve critical judgments and grading. The researchers understand that the modeling involves both teachers and students, where each develops an image and understanding of the other's world while suspending their own opinions and values. Teachers could utilize these skills to connect with their students, which in turn aids in modifying their health behaviors. Teachers' modeling acts can improve students' health; however, the low level of practice indicates a gap. Therefore, refresher training is suggested to fill the gap, and future research is recommended to explore the reasons for not practicing the skills.

6. DECLARATION

Conflicts of Interest

None.

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Authors' Contributions

BA conducted the fieldwork, prepared the manuscript, and corresponded with the publication procedures. TS, MP, and

BJ supported in literature review and analysis. All authors provide final approval of the version to be published.

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