

Nursing Students' Viewpoints: Effect of Hidden Curriculum on Learning

Fereshteh Barzegar¹, Ezzat Paryad^{2*}, Shirin Jafroudi³, Ehsan Kazem Nezhad Leyli⁴, Atefeh Ghanbari Khanghah⁵

¹Nursing (MSN), Heshmat Medical and Educational Center, Guilan university of Medical Sciences, Rasht, Iran

²Social Determinants of Health Research Center (SDHRC), Department of Nursing, Instructor, Guilan University of Medical Sciences, Rasht, Iran

³Department of Nursing (Medical-Surgical), Instructor, School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran

⁴Social Determinants of Health Research Center (SDHRC), Bio-Statistics, Associate Professor, Guilan University of Medical Sciences, Rasht, Iran

⁵Social Determinants of Health Research Center (SDHRC), Department of Nursing (Medical-Surgical), Associate Professor, Guilan University of Medical Sciences, Rasht, Iran

*Corresponding author: Ezzat Paryad, School of Nursing and Midwifery, Rasht

E-mail: e_paryad@gums.ac.ir

Received: 05/21/2017; Accepted: 11/06/2017

Abstract

Introduction: The experiences of learners in the educational system are not just limited to the overt curriculum. Other factors also play a significant role in shaping student learning in the form of hidden curriculum. Students' views on this issue can help design a suitable curriculum.

Objectives: The purpose of this study was to determine the viewpoint of nursing students about the hidden curriculum on learning.

Materials and Methods: This is a descriptive-analytic cross-sectional study. The sample size of this study comprised 300 nursing students of the Guilan University of Medical Sciences' Faculty of Nursing (students of the 2nd to the 8th semesters) who were selected using the random sampling method. The research instrument included a researcher-made questionnaire consisting of two parts of the socio-demographic characteristics and 34 statements about students' views regarding the effect of hidden curriculum on learning. Data analysis was performed using descriptive statistics and the binomial test.

Results: The results of this study on the effect of the hidden curriculum on learning showed that the subjects agreed on the impact of the program in 25 statements ($P=0.038$) and selected disagreement options only in nine statements. According to responses of the research subjects, the reasons why the hidden curriculum was effective on learning based on students' viewpoints are: Good student-professor relationship (88%), a chance to interact with experienced professors (82%), student humiliation (80%), equipping classes with up-to-date electronic teaching aids (80%) and attention to the peer group as a model of behavior (53%).

Conclusion: The findings of this study confirm the profound effect of the hidden curriculum on learning. Considering the importance of the formal curriculum, more attention to the hidden curriculum can boost knowledge among students.

Keywords: Curriculum, Learning, Nursing Students

Please cite this article as: Barzegar F, Paryad E, Jefroudi S, Kazem Nezhad Leyli E, Ghanbari Khanghah A; Nursing students' viewpoints: Effect of hidden curriculum on learning. J Holist Nurs Midwifery. 2018;28(1):26-34

Introduction

The hidden curriculum refers to the category of educational goals that are not explicitly described in the curriculum or educational policies, but seems to be an integral part of the educational process [1–3]. In fact, the emotional atmosphere and unwritten environmental conditions that can affect the values and emotions of the learning audience in an educational setting is the hidden curriculum [4, 5]. The curriculum may have positive, as well as negative dimensions in medical education, especially in the context of transferring values [6]. Medical education experts feel that the hidden curriculum is the most powerful way of transferring professional values and its impact is strong in creating a professional commitment among learners. Students can achieve higher levels of learning by hearing about the experiences of their instructors in the educational environment and witnessing their teaching methods [7, 8]. This is more important for medical students whose learning occurs during clinical settings [9, 10].

During clinical education, students implicitly learn about the culture of medical science and gain knowledge from conversations during clinical training through informal learning sessions, and by seeing their professors as models while interacting with a patient. Even the physical structure of educational environments is part of the hidden curriculum since they can affect learning [12]. Considering that academic education covers a wide range of topics, the hidden curriculum can play a more important role in the learning process. This is especially applicable to medical students in terms of their professional nature, varied educational areas, and the extensive clinical learning they undergo [13]. We must take into account the role of the hidden curriculum if we need knowledge and skills necessary to perform

professionally in addition to strengthening our values as well as attitudes. Considering the varied structures and manpower in different settings, educational environments can have different effects on learners, although the formal curriculum is identical. Therefore, knowing the viewpoints of nursing students about the effects of this part of the curriculum can reveal the hidden truth about this curriculum in nursing education.

Materials and Methods

This is a descriptive-analytical cross-sectional study. The research population consisted of all undergraduate nursing students in the 2nd to 8th semesters in the Faculty of Nursing and Midwifery, the Shahid Beheshti University of Rasht, and the Nursing Faculty of East Guilan in the year 2014. According to the results of Taghvaei et al.'s study [1] with estimate error 0.05, a total of 320 samples were selected for the study. A total of 425 undergraduate nursing students in the 2nd to 8th semesters in the Faculty of Nursing and Midwifery, the Shahid Beheshti University of Rasht, and the Nursing Faculty of East Guilan who had hospital work experience, participated in data collection. Upon submission of the written consent form, only 300 individuals signed the consent form. Data collection was performed using the simple random sampling method. The research instrument was a researcher-made questionnaire consisting of two main parts. The first part examined the socio-demographic information of the subjects and the second part was derived from the results of Salehi's [14], Taghipour et al.'s [15] and Taghvaei's [1] studies and included 34 questions about the hidden curriculum. The questionnaire was answered on a five-point Likert scale (1=very low), (2=low), (3=partly), (4=high), (5=very high) and the mean score of three was chosen as the standard to evaluate the students' opinion

about each question. The instrument validity was assessed using the content validity method. At first, the instrument questions were provided to 12 faculty members of nursing who were specialists in medical education. Their opinions were obtained on Content Validity Index (CVI) and Content Validity Ratio (CVR) forms. After reviewing their opinions and making changes in statements with a score of less than 70%, the instrument was given again to the five specialists of the same group and CVI & CVR scores were recalculated. At this stage, CVI & CVR scores were more than 98%. Then, the questionnaire was given to 20 undergraduate nursing students of Shahid Beheshti Faculty of Nursing and Midwifery.

They were asked to complete the questionnaire and, at the same time, specify ambiguities that could not be answered. According to the views of 20 students, none of the statements was ambiguous. The internal consistency of the statements was determined using the Cronbach's alpha coefficient and based on the responses, it was equal to 0.97. To determine the reliability of the instrument, the test-retest method was used and the instrument was given to the same 20 individuals after 10 days. The correlation between the first and second stage responses was calculated to be 0.95 using the Pearson coefficient, which confirmed reliability of the questions. The 20 students, who participated in the pilot study, were considered to be the research subjects.

Descriptive statistics such as mean, standard deviation and frequency distribution were used to categorize and summarize the data. First, the normal distribution of data was assessed using the Kolmogorov-Smirnov test. The results showed that the data had normal

distribution. Then, the response rate of the subjects to each question was analyzed using the binomial test. The significance level was considered to be $P < 0.05$. Data analysis was performed using the SPSS Ver. 16. The consent form was given to the subjects before delivery of the instrument and after the research objectives were explained to them. The inclusion criterion included passing at least a clinical unit and the exclusion criterion was lack of will to participate in the research.

Results

The results indicated that 78% of the subjects were female students and 95% of them had no history of academic probation. The majority (69%) of them was native and lived with family. Subjects' mothers and fathers had high school diploma in 45% and 47.7% of the cases, respectively. Around 70% of the participants' mothers were housewives and 46% of the fathers were employees. According to responses of the research subjects, the reasons why the hidden curriculum was effective on learning based on students' viewpoints are: Good student-professor relationship (88%), a chance to interact with experienced professors (82%), student humiliation (80%), equipping classes with up-to-date electronic teaching aids (80%) and attention to the peer group as a model of behavior (53%). Table 1 shows the agreement about benefits of the hidden curriculum on learning based on the binomial test.

Students showed the highest level of agreement about benefits of the hidden curriculum, which was not included in the formal curriculum but had the greatest impact on their learning ($p=0.05$). Hidden curriculum included appropriate laboratory facilities and training, room for practical

Table 1. Frequency distribution of the viewpoints of the subjects based on the average score of each statement

Statement		Grouping	Number	Percentage	Sig.*
.1	Architecture of the faculty	≤ 3	170	0.57	0.024
		> 3	130	0.43	
.2	Open and fence-free spaces around the college	≤ 3	172	0.57	0.013
		> 3	128	0.43	
.3	Having a meeting hall and negotiation table in the college	≤ 3	127	0.42	0.009
		> 3	173	0.58	
.4	Appropriate laboratory facilities and training aid	≤ 3	64	0.21	0.0001
		> 3	236	0.79	
.5	Presence of green space, painting and poem on the faculty wall	≤ 3	146	0.49	0.686
		> 3	154	0.51	
.6	The distance from the college to the student's residence	≤ 3	136	0.45	0.119
		> 3	164	0.55	
.7	The presence of maps and educational pictures in the classroom	≤ 3	112	0.37	0.0001
		> 3	188	0.63	
.8	Choosing a room for practical work	≤ 3	61	0.20	0.0001
		> 3	239	0.80	
.9	Classroom grouping and forming student groups by the students themselves (freedom of action)	≤ 3	88	0.29	0.0001
		> 3	212	0.71	
.10	Seats arrangement	≤ 3	145	0.48	0.603
		> 3	155	0.52	
.11	The availability of suitable heating and cooling equipment	≤ 3	95	0.32	0.0001
		> 3	205	0.68	
.12	Presence of student council and their involvement in college affairs	≤ 3	146	0.49	0.686
		> 3	154	0.51	
.13	Having a clean well-lighted and ventilated place	≤ 3	78	0.26	0.0001
		> 3	222	0.74	
.14	Good professor-student relationship	≤ 3	37	0.12	0.0001
		> 3	263	0.88	
.15	The existence of an intimate atmosphere between faculty management and students	≤ 3	63	0.21	0.0001
		> 3	237	0.79	
.16	Good communication between students	≤ 3	58	0.19	0.0001

		> 3	242	0.81	
.17	Appropriate communication between college staffs and students	≤ 3	94	0.31	0.0001
		> 3	206	0.69	
.18	Good contact between the student and the consultant	≤ 3	93	0.31	0.0001
		> 3	207	0.69	
.19	Frequent replacement of curriculum of the college educational system	≤ 3	136	0.45	0.119
		> 3	164	0.55	
.20	Use of experienced experts, scientific and extracurricular amusements, and inviting academic characters	≤ 3	54	0.18	0.0001
		> 3	246	0.82	
.21	Disciplinary Code of Faculty Regulation	≤ 3	147	0.49	0.773
		> 3	153	0.51	
.22	Assigning responsibilities to students and their participation in managing the faculty affairs	≤ 3	143	0.48	0.453
		> 3	157	0.52	
.23	Holding sessions between students and faculty executive members	≤ 3	140	0.47	0.273
		> 3	160	0.53	
.24	Attention to peer groups, as a model of behavior	≤ 3	141	0.47	0.326
		> 3	159	0.53	
.25	Being open to criticism and answering students' questions in quaking	≤ 3	88	0.29	0.0001
		> 3	212	0.71	
.26	Having a critical attitude and answering student questions in the teaching staff	≤ 3	80	0.27	0.0001
		> 3	220	0.73	
.27	School officials' disregard for students' problems	≤ 3	77	0.26	0.0001
		> 3	223	0.74	
.28	Discrimination between students	≤ 3	79	0.26	0.0001
		> 3	221	0.74	
.29	Assigning the assessment score to the discipline of college and class law in curriculum credit	≤ 3	117	0.39	0.0001
		> 3	183	0.61	
.30	Student humiliation	≤ 3	61	0.20	0.0001
		> 3	239	0.80	
.31	Applying methods to encourage student participation in the classroom	≤ 3	79	0.26	0.0001
		> 3	221	0.74	

.32	Use of modern technology (Internet connection, electronic registration, informing the student via email and etc.	≤ 3	60	0.20	0.0001
		> 3	240	0.80	
.33	Equipping classrooms with up-to-date electronic training tools	≤ 3	61	0.20	0.0001
		> 3	239	0.80	
.34	Encouraging students to use appropriate IT facilities in their homework and educational activities	≤ 3	68	0.23	0.0001
		> 3	232	0.77	

*Binomial Test

work, proper relationship between professors and students, existence of an intimate relationship between the management of the faculty and students, proper relationship among students, proper educational planning by the college, presence of experienced professors, student humiliation, use of modern technology (Internet connection, electronic registration, and student information by email, etc.), equipping classes with up-to-date electronic teaching aids and encouraging students to use IT facilities in their homework and educational activities.

Discussion

The findings of this research showed that a good professor-student relationship was the most important variable affecting the learning process from the students' viewpoints. In a study on students' viewpoints about the hidden curriculum in the Kashan University of Medical Sciences, Taghvaei also showed that professor-student interaction and physical space were respectively the most and least effective components of the hidden curriculum on learning from the students' perspective [1]. Therefore, it seems that professor-student interaction dimension had the highest impact on the learning process from the students' point of view. In a study on the impact of the hidden curriculum on learning in the internship period of medical students, Baird et al. also confirmed this point [16].

The friendly, constructive, and supportive relationship of professors can help a student learn better by creating a quiet and friendly atmosphere. The students are likely to be more motivated to learn because of their sense of proximity to their professor and his/her active involvement in the teaching process. Certainly, scientific interactions can flourish in a calm and friendly atmosphere better and the professor-student relationship contributes to this quiet atmosphere. One of the most important components of the hidden curriculum is to design plans to enrich the learning and teaching processes by boosting professor-student interaction and student-to-student interaction. This should be addressed by the curriculum designers, especially in clinical education, where the general atmosphere governing the education is strongly influenced by the professor-student relationship. If students feel they are supported by the professor, they will be more comfortable with clinical learning. Relaxation in the educational environment reduces the tense atmosphere. It seems empathy and mutual understanding help solve problems, creating motivation for learning and professor's experience plays a bigger role than other factors in increasing self-confidence and motivation during learning.

The findings of this research showed that statements such as educational planning of the faculty to employ experienced professors, academic and extracurricular activities, and invitation of experts in the

field of science affect the hidden learning of nursing students. In a study titled 'Examining nursing students' experiences of professors in theory courses,' Haqani showed that professors' experience, readiness for teaching and presenting contents of the day are among factors affecting the nursing students' level of learning [17]. In another study, Jahan et al. referred to the professor's scientific mastery of the course as the most important characteristic of a good professor [18]. The results of Vakili et al.'s study showed that mastery and academic experience of professor are the most important characteristics of a good teacher [19]. Ghorbani et al., in their study titled 'Students' viewpoints of the Faculty of Nursing and Paramedical Sciences of the Semnan University of Medical Sciences', felt good professors show the following traits: mastery on the subject, spontaneity of expression, a proper way of organizing and arranging the lessons and interest in teaching [20].

Academic experience and mastery are the most prominent characteristics of a good professor. The experience of professors in presenting the subject matter and the use of various teaching methods and techniques are among other characteristics that have a positive impact on the attractiveness of content and ultimately contributes to creating a more productive environment. The ability to speak, mastery of the courses and interest in teaching are among the most important characteristics of an instructor. However, it should be kept in mind that sometimes, despite profound scientific mastery in teaching, lack of speaking skills affects the understanding of concepts and the quality of teaching-learning.

Nursing students believed that equipping classes with up-to-date electronic devices is one of the variables boosting their

learning in the form of hidden curriculum. The use of technology for educational purposes can provide a ground in which critical and creative thinking skills are formed and fostered into students [21]. Taghipour and Ghaffari showed in their study that there is a significant relationship between the rate of application of Information and Communication Technology (ICT) in the educational environment and hidden curriculum-based learning [22].

Considering the nature of the educational technology, it can be said that such technology is not only a way of transferring information or producing knowledge, but also a tool to help a student achieve a higher level of analysis and critical thinking. In fact, one of the goals of modern education, such as classroom Internet connection, clinical education, electronic registration, informing students via email, and equipping classes with electronic devices is to promote learning by the hidden curriculum. It seems that when the instructor uses new technology to present his or her teaching material, considering the young people's interest in such technology, the interactive learning gives an identity to both the learners and instructors. This leads to elevated learning.

The findings of the current research showed that student humiliation also has a negative impact on their learning. In a study on medical students' perception about effects of the hidden curriculum, Seale and Lempp also showed similar results [23]. Mehre Mohamadi examined the effects of curriculum on high school students. They found that one of the most significant outcomes of learner humiliation was strengthening the spirit of obedience rather than the critical thinking spirit [24]. However, the results of Price and Pololi's study on the measurement of peripheral

learning by medical students show that students experience multiple cases of humiliation from their professors [25]. Encouraging students and giving them positive feedback can help increase self-confidence and enhance their learning ability. This will encourage them to participate in the education process. Creating and strengthening the spirit of obedience and subordination instead of the spirit of innovation in teaching are one of the factors that delay social upbringing. Considering that the findings of this research showed that communication in the educational environment fosters learning, it is recommended that future studies should examine the impact of different ways of communication with students, considering their learning ability. Considering that the data collection method used in the current research was a questionnaire, the psychological conditions of the respondents may have affected their response, which is beyond the control of the researcher.

Acknowledgments

This article is based on the results of a research project approved by the Guilan University of Medical Sciences and the Medical Education Research Center of the Guilan University of Medical Sciences. The authors express their gratitude to the Center for paying some of the costs of this research. They also thank the students who participated in this research. There was no conflict of interest in this research.

Conflict of interest

No conflict of interest has been declared by the authors.

Author contributions

All authors have agreed on the final version and meet at least one of the following criteria [recommended by the ICMJE

(<http://www.icmje.org/recommendations/>):

-Substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;

-Drafting the article or revising it critically for important intellectual content

References

1. Taghvaei Yazdeli Z, Yazd Khasti A, Rahimi H. A Study OF Hidden Curriculum In Kashan University OF Medical Sciences Based ON Students' Views. *Journal of medical Education Development* .2014;6(12):14-23. Persian.
2. Eisner E W. *The education imagination : on the Design and Evaluation of school program*. Newyork:MacMillan;1983.p.187.
3. Bandini J, Mitchell C, Epstein-Peterson ZD, Amobi A, Cahill J, Peteet J, et al. Student and Faculty Reflections of the Hidden Curriculum:How Does the Hidden Curriculum ShapeStudents' medical Training and Professionalization? *Am J Hosp Palliat Care*. 2017 Feb;34(1):57-63. doi: 10.1177/1049909115616359. Epub 2016 Jul.
4. Karimi F. Hidden curriculum; emphasis on social education. *Iranian Quarterly of Education Strategies*. 2012; 5, (2):125-130.
5. Ghourchian N G. *The First International Terminology of Curriculum*.Tehran: Institue for Reserch & Planning in Higher Education;1994.p.133.
6. Salehiyan M. View to teacher and hidden curriculum. *J Teacher Development*. 2010; (1): 48-9. Persian.
7. D'eon M, Lear N, Turner M, Jones C. Perils of the hidden curriculum revisited. *Medical Teacher*. 2006;(29): 295-296.
8. Mehrmohammdi M. *Curriculum, views, approaches and perspectives*. 2ed Ed. Tehran: Samt; 2008. Persian.
9. Stern DT, Papadakis M. The Developing Physician Becoming a Professional. *N Engl J Med*. 2006 Oct 26;355(17):1794-9.
10. Margolis E. *The hidden curriculu in higher education*. New York: Routledge; 2001.
11. Salehi Sh. Students' Experience with the Hidden Curriculum in the Faculty of Nursing and Midwifery of Isfahan University of Medical Sciences. *Journal of Medical Education*. 2006; 9(2):79-84.
12. Wade GH, Kasper N. Nursing students' perceptions of instructor caring: an instrument based on Watson's Theory of Transpersonal Caring. *J Nurs Educ*. 2006;5 (6):162-8.
13. Fins JJ, Gentileco BJ, Carver A, Lister P, Acres CA, Payne R, et al. Reflective practice and palliative care education: A clerkship responds to the informal and hidden curricula. *Academic Medicine*.2003;28(3): 307-312.

14. Salehi Sh, Rahimi M, Abedi H, Bahrami M. Survey of students experiences of hidden curriculum in nurse college of Isfahan medical sciences. *J Research in Medicine*. 2003; 27(3):217-223. Persian.
15. Taghipoor H, Ghaffari H. Survey of the hidden curriculum role in students' disciplinary behavior from the teachers and managers perspective of Khalkhal female middle schools. *Journal of Educational Sciences*. 2009; 2(7); 33-65. Persian.
16. Baird judy, Bracken Keyna, Grierson Lawrence EM. The relationship between Perceived Preceptor Power Use and Student Empowerment during Clerkship Rotation a Study of Hidden Curriculum. *Medical Education Journal*. 2016; 50:778-785.
17. Haghani F, Hemati z Kiani D. Nursing students' perceptions of teaching by teachers in theoretical courses: A qualitative study. *Journal of Nursing Education*. 2015 4(11): 39-48. Persian.
18. Jahan F, Sadaf S, Kalia S, Khan A, Hama HB. Attributes of an effective clinical teacher: A survey of students' and teachers' perceptions. *J Coll Physicians Surge Pak*. 2008; 18(6): 357-361.
19. Vakili M, Nourian A, MousaviNasab S. Characteristics of a Good Teacher from the Point of View of Student and Teaching Staff in Zanjan University of Medical Sciences . *Journal of Medical Education Development*. 2009; 1 (1): 17-28. Persian.
20. Ghorbani R, Haji-Aghajani S, Heidarifar M, Andade F, Shams-Abadi M. Viewpoints of nursing and para-medical students about the features of a good university lecturer. *Koomesh*. 2008; 10(2): 77-83. Persian.
21. Berg Lucretia A, Haerling K, MacDonald G. Navigating the Hidden Curriculum of Higher Education for Postsecondary Students with Intellectual Disabilities. *American Journal of Occupational Therapy*. 2017; 71(3):24-31.
22. Taghipoor H, Ghaffari H. Survey of the hidden curriculum role in students disciplinary behavior from the teachers and managers perspective of Khalkhal female middle schools in 2009- 2010 academic year. *J Educational Sciences*. 2009; 2(7): 33-65. Persian.
23. Lempp H, Seale C. The hidden curriculum in undergraduate medical education: qualitative study of medical students' perception of teaching. *British Medical Journal*. 2004; 329(7469): 770-773.
24. Mehrmohammadi M, Alikhani D. A survey of unintended consequences of hidden curriculum in high schools of Isfahan [dissertation]. Isfahan: University of Isfahan; 2009. Persian.
25. Pololi L, Price J. Validation and Use of an Instrument to Measure the Learning Environment as Perceived by Medical Students. *Teaching and Learning in Medicine*. 2000; 12(4):201-207.