## Original article

# Investigating the Hidden Curriculum from the Perspective of Mazandaran Para-medical Students

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**Abstract:**

**Introduction:** The present study aims at investigating the hidden curriculum indicators in Mazandaran Medical Sciences University (Sari's Para-medical school) from the perspective of the university students.

**Methods:** This study has been conducted on a study population comprised of Sari's Para-medical school (n=217) during the academic year of 2016-2017. The information collection tool was the hidden curriculum questionnaire containing 36 items. The data were analyzed with SPSS.V.16 using single-variable t-test, normality test, variance analysis test, Levene test and independent t-test.

**Findings:** The findings indicated that the hidden curriculum enjoys a rank some 3.96 higher than intermediate. Also, there was not found any significant difference between the students' perspectives (gender-based) regarding the hidden curriculum stance but there was found a significant difference between the students' perspectives regarding hidden curriculum (based on study fields).

**Conclusion:** according to the scientific and social problems with which the universities are faced, the students' perspectives are reflective of their positive appraisal of the hidden curriculum in Para-medical schools.

**Keywords:** Hidden curriculum, Rules and regulations, Professors' knowledge

## Introduction:

During the history of curriculum, a great deal of effort has been made by the experts so as to more increasingly enrich curricula (1). Inter alia the most important efforts made in this regard and considered as a relatively new and valuable concept in curriculum is the hidden curriculum the existence of which alongside with the explicit curriculum signifies the necessity of paying attention to the totality of what it has experienced and learnt as a result of its presence in the heart of the formal education system (1, 2). Every educational system tries to design and compile certain programs so

as to transfer different types of knowledge and skills to the individuals to make them ready play roles and shoulder responsibilities in real life (3). Individuals learn very valuable experiences transferred via the curriculum in the education systems (1). To describe the hidden curriculum, there are numerous terms and expressions applied in variegated forms such as non-codified study program, hidden, intangible, unwritten, unpredicted and invisible curriculum as well as nonscientific results, secondary products or results and margin of education system each of which point to an aspect of hidden curriculum (4).

The scientist who first used the term "hidden curriculum" was Phillip Jackson who authored the book "Life in Classroom" in 1968 (5). In 1992, he re-codified and reintroduced the concept in the book "Conceptions of curriculum and curriculum specialists" (6). Rooke and Opel (7) believe that the hidden curriculum has not been hidden in the course of history rather the schools have had an explicit performance during the history of their existence an activity as an institution. During the 19$^{th}$ century, the growing trend of the political, social and cultural diversity as well as the existent structures urged the teachers to accept the power of the hidden curriculum in relation to social control and its prevalence in line with this (8). Silver-Brody (9) see the hidden curriculum in the difference between the designed study plan and the curriculum experienced by the learners and know it as the learner strategies in successfully breaking through the formal or designed curriculum barrier. Giroux and Purpel (10) believes that "hidden study program in schools deals with the implicit transferring of those set of norms, values and considerations resulting from the school's social relations and classroom". Flinders and Eisner (11) is of the belief that the "hidden curriculum incorporates the values and expectations that are not usually predicted in the formal study program but the students learn these concepts during their educational experiences in schools". These learnt materials are less directed at the area of pertinent knowledge or recognition. From the perspective of Lempp and Seale (12) who investigated the hidden curriculum in the area of medical sciences. The hidden curriculum encompasses a series of effects that act in a structural and cultural level of the organization and as a specimen includes implicit regulations in line with the institutional survival. Rogers, Boehler (13) knows hidden curriculum specifically in the area of medical sciences as learning that the university students take in via the organizational nature and structure as well as through observing the professors and mangers' behaviors and attitudes. Rooke and Opel (7), Giroux and Purpel (10) as well as Cotton, Winter (14) all believe that hidden curriculum points to a constellation of unwanted, but completely real, results and aspects of the educational process. Alavi Hadad, Abdolahi (15), in a study, came to the conclusion that the students learn the hidden curriculum in the course of scholastic learning and that the hidden curriculum is directed opposite to the indicators of open scientific spirits including the strengthening of passivity spirit and fear in lieu of criticism and questioning intents. Michalec (16) concluded in a study that there is a

significant relationship between the hidden curriculum indicators including the physical structure and reward and punishment mechanism with the students' disciplinal behaviors. Bayanfar (17) concluded in their study that the negative and unintended aspects of hidden curriculum directly or indirectly exert negative and persistent effects on the students' learning affective outputs.

However, the hidden curriculum is envisioned as a pillar of the country's higher education communities and there are numerous opinions expressed regarding its effectiveness (18). The universities are required to implement their own specific formal and informal regulations in line with which the students are deemed as being sharply influenced by them (12). However, according to what was offered regarding the hidden curriculum and its various effects and aspects, the present study is seeking to investigate four main indicators of hidden curriculum, i.e. rules and regulations; interpersonal relationships, student-professor mutual relationships and professors' awareness, from the perspective of Para-medical department students. Therefore, their opinions regarding the creation of this type of study program's performance lead to a better academic achievement. Thus, reaching to a consensus by the officials and the study population of concern to the present study can be served as providing a better performance. So, documentation of the beliefs and the discrepancies in terms of the individuals' demographic characteristics can make a lot of issues clear to the officials. Hence, the present study aims at evaluating the students' perspectives regarding the hidden curriculum process in Sari's Para-medical school.

**Methods:**

This cross-sectional study was done in 2016. The study population was comprised of all of Sari's Para-medical School students for the academic year of 2016-2017 (n=909). To determine the study sample volume, Krejcie and Morgan table was applied and a total of 271 students were accordingly selected as the study sample volume in proportion to the study population (19). The stratified random sampling was employed based on the study field for the selection of the study subjects in such a manner that the students from eight study fields (operation room, 51 individuals, anesthesiology, 49 individuals, medical emergency, 11 individuals, work therapy, 22 individuals, health information technology, 24 individuals, laboratory sciences, 54 individuals, radiology, 54 individuals, medical sciences history, 5 individuals, were studied (Table 1 summarizes the study sample volume's frequency scores).

The information gathering tool was a researcher-constructed questionnaire containing 36 questions and it covered the four main variables (rules and regulations, 10 items, interpersonal relationships, 11 items, professor-student mutual relations, 8 items, professors' awareness, 7 items. The answers were scored based on Likert's scale (very high, high, to some extent, low and very low). To determine the face validity and content validity of the abovementioned questionnaire, it was administered to the professors and experts specialized in the pertinent area; in addition, to determine the

reliability, a number of 30 questionnaires were distributed among the respondents in a preliminary investigation plan and a reliability coefficient of α =0.79 was computed.

To analyze the data extracted from the questionnaires, descriptive statistics (frequency distribution, mean and standard deviation) method and inferential statistics (one-variable t-test, normality test, variance analysis test, Levene test and independent t-test) method were applied.

**Findings:**

Participants profile was indicated in table 1. About 5% of the participants are married and 95% are single (Table 1). According to the fact that the information presented in table (2) is indicative of the entire variables being found significant in a normal level, one-sample t-test was utilized. The findings demonstrated that p-value is below α=0.05 and the t-values calculated for all the variables were found larger than the t-value of the table (1.96) (Table 2). Next, the discrepancies between the students according to their fields of study have been taken into consideration. The findings given in table (3) are representatives of Levene's test significance values that are found larger than error level (α=0.05) and thus the null hypothesis, indicting the variances' homogeneity, is confirmed. So, there remains no reason evidencing the variances' inhomogeneity. Also, according to the fact that the amount of F-value calculated herein for the variables (rules and regulations, professor-student mutual relations, professors' awareness and the main variable) with degrees of freedom equal to 7 and 363 in a 95% confidence level (α=0.05) is larger than the critical F-value estimated in the table (F=2.03), hence it is concluded that there is a significant difference between the aforementioned variables according to the students' study fields but no significant difference was documented between interpersonal relationships (F=1.030) in terms of the study fields. Moreover, the study findings indicated that the highest mean score goes to the professors' awareness and the lowest mean belongs to the professor-student mutual relations (Table 3). To investigate the individuals' perspectives based on their gender, independent t-test was utilized. According to table (4), it can be concluded that the results of the perspectives in terms of the gender does not bring about any significant different in these variables. Also, the findings demonstrated that there is only found a significant difference in the perspectives of the variable "rules and regulations" in terms of gender (Table 4).

## Discussion:

The present study dealt with the investigation of Medical Sciences University students' perspectives regarding hidden curriculum. The findings indicated that the mean values obtained for the study variables are considered in a relatively favorable range from the perspective of Sari's Para-medical school students. According to the obtained results, it can be inferred that the students know the hidden curriculum performance effective on a great many of the explicit study program and also they realize the materials learnt in the course of hidden curriculum as more stable and more

pervasive. In their minds, the hidden curriculum not only has an influence on the individuals' behaviors but it also subjects the education process to changes. Moreover, the findings indicated that the students openly welcome the rules governing the university, including the classroom and administrative system regulations, and respect them in such a manner that observance of politeness and respect towards the principal, his deputy, professors, instructors as well as the other education unit staff members were underlined as factors giving rise to the increase in the students' academic motivation and the students were found doing their best to learn and educate and follow the educational and instructional orders as well as participate in the university's social activities; furthermore, such rules as on-time presence at the educational department and exiting the education unit at the end of the specified time as well as avoiding unjustified absence for more than five consecutive hours and observation of personal hygiene and cleanliness and cooperation with the other university students and the corresponding officials in keeping the university campus clean and refraining from eating during the class hour and making efforts parallel to and paying attention to the preservation and taking care of the instruments and having no illegitimate relationship with the opposite sex and having no forbidden things accompanied in the scientific environment were in addition to the committed and warm and receptive mutual behaviors of the other students were also scored positive. The honesty and trust created amongst the students were also referred to as auspicious outcomes which bar the exhibition of hostile and judgmental behaviors. The ideas and behaviors free of any ambiguity and uncertainty were also welcomed and supported. The findings additionally demonstrated that the students' attitudes towards the professor-student mutual relationships are very positive in such a way that the unconditional relationships between the professors and students were scored positively and the professors were deemed sufficiently concerned about the tiniest amount of progress made by the students and they were also found featuring ethical stability. The professors underlined the elimination of the students of their weak pints and augmentation of their strong points. The class rules pertaining to the professor-student mutual relationships concerning the observance of respect and politeness during break time were scored highly appropriate and positive. The findings also indicated that the students were satisfied with the professors' knowledge level. The students also appreciated the professors' recognition of the education principles and foundations, their enjoyment of the professional knowledge and skills, their recognition of educational goals, their skills of using instruments and educational technologies, their knowledge of teaching methodologies and techniques as well as their familiarity with the scientific method and considered the aforesaid knowledge effective on the their own elevation of academic achievement and motivation. These findings are consistent with the results obtained by Amini, MEHDIZADE (20), Karimi, Ashktorab (21), Glicken and Merenstein (22), Lempp and Seale (12),

Margolis (23), Ahola (24), McCaughey and Cermele (25), and Doja, Bould (26).

The findings also showed that there is a significant difference between the students' study fields and their perspectives in regard of the hidden curriculum. It can be deduced that different study programs are offered according to the difficulty and easiness level of the study fields and also various professors bring about differences in the hidden curriculum in different study fields. Also, the findings indicated that the interpersonal relationships were altogether similar in students' entrance to various study fields and such a lack of difference can be a reason contributing to the inferences made of the hypothesis. Moreover, the findings were reflective of the idea that the hidden curriculum acceptance level has remained similar both of the genders. So, in regard of the idea that both girls and boys might study in the same field, there is a balance in terms of hidden curriculum achievement in them. The rules and regulations were envisaged differently by girls as compared to boys and this latter result might have occurred due to the universities' being stricter to the girls and it might be followed by dissatisfactions.

## Conclusion:

In the end, the findings were suggestive of the idea that from the perspectives of Sari' Para-medical school students, the hidden curriculum is generally scored positive and that there are also differences, even small ones, between the various study fields from the perspective of the university students.

## Conflict of interests:

There were no conflicts of interest to declare.

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## Tables:

**Table 1:** Study population and sample volume frequency distributions

| Components | Sub-components | Population frequency | percentage | Sample volume frequency | percentage |
|---|---|---|---|---|---|
| gender | Boy | 866 | 95 | 274 | 91 |
| | Girl | 43 | 5 | 24 | 9 |
| | Total | 909 | 100% | 271 | 100% |
| Marital status | Married | 55 | 6 | 13 | 95 |
| | Single | 854 | 94 | 258 | 5 |
| | Total | 909 | 100% | 271 | 100% |
| Education level | BA | 894 | 98 | 266 | 98 |
| | MA | 15 | 2 | 5 | 2 |
| | Total | 909 | 100% | 271 | 100% |
| Study field | Operation room | 171 | 19 | 51 | 19 |
| | Anesthesiology | 164 | 18 | 49 | 18 |
| | Medical emergency | 35 | 4 | 11 | 4 |
| | Work therapy | 75 | 8 | 22 | 8 |
| | Information technology | 85 | 9 | 24 | 9 |
| | laboratory sciences | 178 | 20 | 54 | 20 |
| | Radiology | 186 | 20 | 54 | 20 |
| | Medical sciences history | 15 | 2 | 5 | 2 |
| | Total | 909 | 100% | 271 | 100% |

**Table 2:** Investigation of the students' opinions of hidden curriculum

| Components | Mean | Standard deviation | Normality test | *t*-test | *p* |
|---|---|---|---|---|---|
| Rules and regulations | 4.03 | 0.44 | 0.094 | 38.02 | 0.000 |
| Interpersonal relationships | 3.95 | 0.50 | 0.096 | 31.42 | 0.000 |
| Professor-student mutual relations | 3.76 | 0.56 | 0.094 | 22.09 | 0.000 |
| Professors' awareness | 4.12 | 0.37 | 0.097 | 49.62 | 0.000 |
| Hidden curriculum (main component) | 3.96 | 0.42 | 0.120 | 37.70 | 0.000 |

**Table 3:** Investigation of the students' opinions regarding the hidden curriculum through variance analysis (ANOVA)

| Components | Study fields | Mean | Standard deviation | Levene test's significance level | F-value | *p* |
|---|---|---|---|---|---|---|
| Rules and regulations | Operation room | 3.93 | 0.41 | 0.781 | 3.77 | 0.001 |
| | Anesthesiology | 4.22 | 0.41 | | | |
| | Medical emergency | 3.48 | 0.33 | | | |
| | Work therapy | 3.93 | 0.53 | | | |
| | IT | 3.82 | 0.44 | | | |
| | Laboratory sciences | 4.15 | 0.43 | | | |
| | Radiology | 4.01 | 0.42 | | | |
| | Medical sciences history | 3.94 | 0.33 | | | |
| Interpersonal relationships | Operation room | 3.88 | 0.49 | 0.718 | 1.030 | 0.411 |
| | Anesthesiology | 4.06 | 0.48 | | | |
| | Medical emergency | 3.80 | 0.52 | | | |
| | Work therapy | 3.91 | 0.52 | | | |
| | IT | 3.85 | 0.50 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Laboratory sciences | 4.03 | 0.54 | | | |
| | Radiology | 3.93 | 0.46 | | | |
| | Medical sciences history | 4.05 | 0.38 | | | |
| Professor-student mutual relations | Operation room | 3.56 | 0.46 | 0.306 | 3.74 | 0.001 |
| | Anesthesiology | 4.00 | 0.54 | | | |
| | Medical emergency | 3.75 | 0.59 | | | |
| | Work therapy | 3.68 | 0.66 | | | |
| | IT | 3.45 | 0.50 | | | |
| | Laboratory sciences | 3.83 | 0.60 | | | |
| | Radiology | 3.83 | 0.55 | | | |
| | Medical sciences history | 3.62 | 0.34 | | | |
| Professors awareness amount | Operation room | 4.13 | 0.41 | 0.329 | 2.23 | 0.032 |
| | Anesthesiology | 4.14 | 0.36 | | | |
| | Medical emergency | 3.83 | 0.18 | | | |
| | Work therapy | 4.20 | 0.31 | | | |
| | IT | 4.10 | 0.38 | | | |
| | Laboratory sciences | 4.22 | 0.39 | | | |
| | Radiology | 4.03 | 0.33 | | | |
| | Medical sciences history | 4.17 | 0.27 | | | |
| Hidden curriculum | Operation room | 3.87 | 0.38 | 0.911 | 0.40 | 0.021 |
| | Anesthesiology | 4.11 | 0.41 | | | |
| | Medical emergency | 3.80 | 0.39 | | | |
| | Work therapy | 3.92 | 0.48 | | | |
| | IT | 3.80 | 0.40 | | | |
| | Laboratory sciences | 4.06 | 0.44 | | | |
| | Radiology | 3.95 | 0.39 | | | |
| | Medical sciences history | 3.95 | 0.29 | | | |

**Table 4:** Investigation of the students' opinions in respect to hidden curriculum through independent t-test

| Components | Gender | Mean | Standard deviation | t-test | *p* |
|---|---|---|---|---|---|
| Rules and regulations | Boy | 4.22 | 0.44 | 2.21 | 0.028 |
| | Girl | 4.01 | 0.43 | | |
| Interpersonal relationships | Boy | 3.94 | 0.49 | 1.63 | 0.103 |
| | Girl | 4.11 | 0.56 | | |
| Professor-student mutual relations | Boy | 3.57 | 0.56 | 0.927 | 0.355 |
| | Girl | 3.86 | 0.57 | | |
| Professors' awareness | Boy | 4.12 | 0.36 | 0.061 | 0.952 |
| | Girl | 4.13 | 0.47 | | |
| Hidden curriculum (main component) | Boy | 3.95 | 0.41 | 1.451 | 0.127 |
| | Girl | 4.09 | 0.44 | | |