

5 ICLICE 2016-057 Nasrin Shokrpour

Professional Identity Development in Medical Students at Basic Sciences Stage

Nasrin Shokrpour*, Elham Nasiri
English Department, Shiraz University of Medical Sciences,
Shiraz, Iran

*Corresponding Author: shokrpourn@gmail.com

ABSTRACT

This study aimed at investigating the factors contributing to the formation of professional identity of medical students at the stage of basic sciences. To fulfill the mentioned goal, 41 male and female students at the international branch of Shiraz University of Medical Sciences took part in the study. Through long term interaction and interview with the students, it was revealed that several factors are involved in the development of medical students' professional identity that could be categorized as educational, familial, socio-economic, and personal. Such categorization, then, constituted the questionnaire that was constructed based on Personality and Social Structure Perspective (PSSP) model (House, 1977). The reliability of the questionnaire was calculated as 0.731; then, it was administered to find out the contribution of the mentioned factors. Descriptive and analytic data analysis revealed that the factors are significantly different, with the personal factor ranking first. Social, educational, and familial factors stood next, respectively. It was concluded that at the basic science stage, the students are more influenced by their own attitude than their family, social or educational factors. This might turn out to be different at later stages of their education, which can be the issue to be further studied. Those interested in the formation and development of professional identity in students, whether medical students, authorities of medical education, professors, administrators, and even parents can find this study beneficial.

Keywords: Identity, Medical students, Professional identity, Personality, Social factors

Introduction

There has been increasing emphasis on professionalism in medical education over the past several decades. More recently, authors have begun to discuss professional identity development, as the foundational process one experiences during the transformation from a lay person to a physician (Inui, 2003).

As to the psychosocial theory of identity formation, Erikson (1964, 1968) defined identity as “a subjective sense of sameness felt by individuals within themselves, an experience of continuity oriented towards a self-chosen future”. Erikson (1982) defined eight stages of development based on the psychodynamic theory:

- 1) trust versus mistrust,
- 2) autonomy versus shame and doubt,
- 3) initiative versus guilt,
- 4) industry versus inferiority,
- 5) identity versus role confusion,
- 6) intimacy versus separation,
- 7) generativity versus regression,
- 8) coherence versus hopelessness

In Erikson's view, identity formation encompasses three broad domains: fidelity, ideology, and work. The basic process of identity formation consists of choosing commitments. It is a process of active seeking, and becoming committed to a group of people and to a set of ideas one can trust. To form their identities, people must base their choices of values, career, work, political commitments, and religious beliefs on ideological alternatives related to the existing range of alternatives for identity formation (1968). In this regard, coherence is achieved when the ideology chosen is one that provides a convincing world image. The choice of occupation is implicit in the larger need for coherence and sameness that defines identity (Katja Ryynänen, 2001).

As to further definition, Starr (1982) defines profession as "an occupation that regulates itself through systematic, required training; that has a base in technical, specialized knowledge; and that has service rather than profit orientation enshrined in its code of ethics".

Based on the Eriksonian criteria of self-exploratory crises and personal commitments, Marcia (1966) developed an identity status paradigm. An identity status interview is used to assess the presence or absence of self-reported crises and commitments. Two of the statuses are involved in active self-exploration: Achievers and Moratoriums. They differ on the commitment dimension. Achievers have reportedly resolved an identity crisis and arrived at self-determined values and goals, whereas Moratoriums are still in the process of examining alternatives to resolve a crisis. The remaining two conditions have not been engaged in a period of effortful self-examination: Foreclosures and Diffusions. Foreclosures have automatically adopted the norms, values, and aspirations prescribed by significant others, especially their parents. Diffusions are uncommitted without crisis. This paradigm has been assessed as being a valid method for assessing inter-individual differences in identity formation, and it has been used in numerous recent psychological investigations concerning identity (Berzonsky, 1990).

Many socio-cultural researchers have based their work on the foundation laid by Vygotsky and Bakhtin. Even though they came from different theoretical frameworks, and neither had explicitly examined the concept of identity, both provide useful theoretical concepts for identity research. According to Vygotsky, all higher mental functions have their origin in social interaction, and only later become properties of individuals through a process of internalization. He proposed that every function in a child's cultural development appears twice: first at the social level and later at the individual level – speech begins for others and is then directed towards oneself. Mediating devices, especially symbols, are generally first taken up in interaction with others and then gradually integrated into one's self-activity (Vygotsky, 1981).

To Bakhtin, identity is a socio-historical product in interaction. The self as it reflects upon its activity is different from the self that acts. To be understood by others, people have to cast themselves in terms of the other, and they do that by seeing themselves from outside. Bakhtin writes about "the space of authoring", implying differences between a neophyte and a person of greater experience, who begins to rearrange, reword, rephrase, re-orchestrate different voices and, by this process, develops his/her own "authorial stance". "One's own discourse and one's own voice, although born of another or dynamically stimulated by another, will sooner or later begin to liberate themselves from the authority of the other's discourse" (Bakhtin, 1981). Bakhtin's concepts of meaning, dialogue, and multi-voicedness have been used previously in, for example, examining interaction in psychotherapy settings (Seikkula, 1994, 1998; Wahlström, 1992) and in doctor-patient interaction (Engeström, 1999; Puustine, 1999). The cultural and historical resources for identity formation represent a diversity of mediational means. Identity may be conceived of as formed when individuals choose, on particular occasions, to use one of more resources from a cultural "tool kit" to

accomplish a given action (Bruner, 1990; Wertsch, 1991). Holland *et al.* (1998) take identity to be a central means by which selves form and reform over personal lifetimes and in the histories of social collectives. They emphasize that identities are improvised in the flow of activity within specific social situations - formulated from the cultural resources at hand. Holland *et al.* (1998) focus on the development of identities specific to practices and activities situated in historically contingent, socially enacted, culturally constructed frames of social life. Identities are constantly being generated; they are responses to, develop in, and hence include the dilemmas set by the struggles, personal crises, and social recruitment under which they form. The interplay of a person's identities is open to and dependent upon continuing social discourse and everyday interaction. Improvisation of new identities makes it possible to draft new answers to the dilemmas encountered, as people author the meaning of action.

Jenkins (1996) criticizes the taken-for-granted distinction between individual-personal and social-cultural identities and proposes a concept of social identity to bridge them. He argues that the individual's unique identity and collective shared identity are, in fact, produced, reproduced and changed by similar processes, and that both are intrinsically social. He insists that selfhood and personhood are completely implicated in each other as internal and external aspects of individual identity. To him, the most important difference between the individual and collective identities is that the former emphasizes difference and the latter similarity.

Jenkins' (1996) concept of "self" is parallel to the general meaning of "identity". He sees all human identities as in some sense social, and he is interested in the process and reflectivity through which identity "works" or is "worked" in interaction and institutionally. He sees identity as an ongoing process about defining meaning. He defines self as "each individual's reflexive sense of her or his own particular identity, constituted vis à vis others in terms of similarity and difference, without which we wouldn't know who we are and hence wouldn't be able to act". In order to identify things, one has to have something in common, but also something that is distinct from the others. People identify themselves so that others may know what to expect from them. Social identities are in themselves one foundation upon which order and predictability in the social world are based.

Analytically, according to Jenkins (1996), it may be necessary to distinguish between different collective identities – groups and categories. He makes a distinction between a collectivity that identifies and defines itself (a group for itself, as a product of group identification) and a collectivity defined by others (a category in itself as a product of categorization). Identity contains both individual and social aspects, which are both developed in the dialectical process between the internal (group identification) and external (social categorization) moments of identification.

When examining the process of making doctors, Downie and Charlton (1992) defined education as involving a wide perspective, as aiming at growth and understanding (the person's entire view of life is transformed), and as morally acceptable as well as person respecting, whereas training involves skills in narrow techniques aimed at operative efficiency. In their opinion, medical education should involve both aspects, but they considered much of the current medical education to consist of merely training. They emphasized the importance of a personal relationship between a student and at least one doctor as a basis for professional development.

Freidson (1970) introduces two meanings of the word "profession"; firstly "an occupation" and secondly "an avowal or promise". The legitimization of professional authority involves three claims: 1) the knowledge and competence of the professional have been validated by a community, 2) his knowledge and competence are based on rational,

scientific grounds, 3) the professional's judgment and advice are oriented toward a set of substantive values, such as health (Katja Ryyänen, 2001).

According to the traditional sociological view, medical professionals enjoy a high social status due to their highly regarded skills, knowledge and ethical commitment. Medical professionalism involves 1) *specificity* (high levels of technical competence and long and intensive training), 2) *expertness* (in matters of health and disease), 3) *affective neutrality* (expectation to treat problems in objective, scientifically justifiable ways), 4) strong insistence on a *collectivity orientation* (collegiality), and 5) obligation to put *the patient's welfare above one's personal interests*. These make it possible for the physician to perform his function acceptably, to validate his professional authority, and to justify the privileges he is accorded (Parsons, 1951).

Professional Socialization

The term 'socialization' in its psychological and sociological meaning refers to the ways in which individuals are shaped into members of certain groups by specific cultures (Merton et al., 1957). Haas and Shaffir (1977, 1982, 1987) see professional socialization as a moral and symbolic transformation of a lay person into an individual who can take on the special role and status. Olmsted and Paget (1969) refer to professional socialization in medical school as an extension of childhood socialization, because it has a strong normative emphasis and medical students have a low status in the power hierarchy and are notably dependent on their socializers. The power of physician-teachers stems from the high motivation of medical students to enter real professional role performance, and the students' success in clinical performance is regularly evaluated by these socializers, which further enhances the dependency.

Students themselves play an active role in the socialization process by sorting out, evaluating, and selecting alternative cues presented by various socializing agents. Shuval (1975) studied professional socialization by participant observation during early clinical training. She viewed professional socialization as a two-way process in which the socializees are alternately pushed forward into professional roles and backward into their familiar student role. Both extremes in the role transformation carried rewards for the socializee: the professional role rewarded the high motivation and the focus on the long range goal, whereas the student role carried the rewards of familiarity, ease of performance, and less responsibility. Systematic observation of four socializing agents - physician-teachers, other hospital personnel, patients and peers - showed evidence of pressure on medical students in both directions. The strength of the relative push toward the collegial or student role by the physician-teachers was shown to depend on the rigidity of the status hierarchy in the hospital as well as on the frequency of informal relations.

Role of Peers. The peer group of students plays a role in social control, regulating the speed with which it is considered legitimate by socializees to take on the professional role (Shuval, 1975). Sinclair (1997) noted that students co-operated within tutorial groups, but competed with outsiders. Haas and Shaffir (1987) highlighted the collective support for independent work in medical schools, which caused many students to put interpersonal relations aside. At the beginning of their studies, students often talked about problematic and puzzling situations with their peers in unofficial settings, but during the clinical phase these opportunities became more scarce (Sinclair, 1997).

Role of Faculty. Becker *et al.* (1963) noted that students developed an academic perspective in their relations with the faculty. Sinclair (1997) and DelVeccio Good (1995) also noted the need of students to express professional idealism towards learning and acquiring experience, to be enthusiastic and show willingness to learn, and to behave

appropriately to one's position in the medical hierarchy. Attending physicians, residents and interns rewarded the students who interacted with enthusiasm, diligence, and attentiveness in patient care and expressed commitment to specific clinical specialties. On the other hand, Sinclair (1997) reported that a failure to show professional idealism (to get the point of the story, pick up major clinical signs, state the probable diagnosis or the fundamental principles of management) caused feelings of inadequacy in students and were felt as deeply wounding to their personal sense of identity. In such situations, students might also experience shame for being "stupid" in public and feel regret for "not knowing" and anger because of the perceived abusive or unfair comments by the seniors. (DelVecchio Good, 1995). The majority of clinical students described experiences of mistreatment (such as humiliation) during medical education from many sources, but mostly from their clinical teachers (Sinclair, 1997). During the clerkship phase, a dramatic shift occurred in the process of professionalization as the students were given greater responsibility for patient care. Throughout the medical training, students continually watched the doctors' working habits, listened to their philosophies of medical practice, and took note of their competencies and incompetencies. (Haas & Shaffir 1977, 1987). Shuval and Adler (1980) noted three basic patterns of role modeling: active identification, active rejection and inactive orientation. They suggested that students selectively pick and choose their professional role models and anti-models from among their teachers in various learning situations.

Role of Nurses. Nurses play an important role as socializers as they run a major part of the activities in the hospital wards where medical students practice (Katja Ryyänen, 2001). Although nurses do not possess any direct authority on medical students, the most immediate feedback in learning situations often came from the nurses. Medical students' position in relation to nurses is dialectic due to the fact that their status as students is lower than that of legitimized nurses, whereas after graduation, these power relations are reversed (Shuval, 1975). Sinclair (1997) also noted this dialectic tension in the relationship between medical students and nurses.

Role of Patients. Throughout the medical education, students reflected upon the nature of their own present and future relationships with patients. During the dissections in the preclinical phase, a link was already established between the student's contemporary attitude towards the dead body and his or her future attitude towards patients (Sinclair, 1997). During the clinical studies, students exhibited anxiety over how patients would accept them in their pseudo-medical role (Becker *et al.*, 1963). Dilemmas in the student-patient relationship were at least partly due to the fact that there were no clear guidelines as to whether to emphasize the learner's or the student-physician's role when meeting patients. (Haas & Shaffir, 1987). Especially, since examining the patients, i.e. clerking, often served only the purpose of learning, it did not form any part of the treatment. Additionally, on many occasions, the doctor-student relationship was more important than the patient-student relationship. In patient encounters, students often had to proclaim ignorance concerning the diagnosis or treatment because of fear of revealing something that the doctors wanted the patient not to know or that they had been told not to reveal (Sinclair, 1997).

Cognitive, Practical and Symbolic Socialization

Becker *et al.* (1963) were interested in the immediate (situational) and long-range perspectives that students used to solve the problem of where to direct their effort during medical education. They found that *the long-range perspectives* of freshmen were both unspecific and idealistic – the goal was to become an ideal physician. *The initial perspective* was concern about academic work and a high level of effort directed towards learning everything by working hard. The researchers found that the academic concerns were worse

than, for example, the experience of attending a dissection. By the middle of the first year, however, the students realized that, despite all their efforts, they could not learn everything in the time available (*the provisional perspective*). They, hence, had to select what they considered important either for practice or for examinations. Students were motivated and committed to work, and many tried to learn exactly what the faculty wanted, using various systems to find out what it was (old exams, faculty tips). *The final perspective* at the end of the first year was pragmatic; the students decided to select the things to study by finding out what the faculty wanted. (Becker *et al.*, 1963).

Emotional Socialization

According to Hafferty and Franks (1994), emotional socialization, which means internalization of the medical feeling rules, is one of the functions of professional training. In the course of this process, things that are startling or disquieting become something that is routine, acceptable or even preferred. Lay persons are transformed into professionals. The informal, hidden curriculum may often be antithetical to the goals and contents of the courses that are formally offered – students encounter conflicting messages about the nature of medical work and their place in it. Students may perceive the educational process as structured around inconsistencies, contradictions and double messages – and this may lead to feelings of moral relativism and cynicism. The overall process of medical training helps to establish and reinforce a value climate of what is wrong and what is right.

Moral Socialization

Downie and Charlton (1992) saw socialization as the development of a particular "world view" of medical morality, which was practical and directed towards action. It involved 1) a short attention span, as *decisions* have to be made *quickly*, 2) *interest with disease* and illness and 3) a high level of *collegiality*. Medical students were divided into classes; all shared the same curriculum and out-of-hours study was expected. A standard of professional behavior and clothing was encouraged. During apprenticeship, students learned the bedside manners by modeling behaviors, attitudes and emotions. The researchers used the term "esprit de corps" to describe the strong team spirit in medical school classes. They noted that the loyalty to the institution and its members was already emerged at the early stages of the medical program and later developed further in practice, and even though their cynicism might have grown, the students did not turn against the profession. (Downie & Charlton, 1992).

As to the gender, female and male students' moral conflict narratives contained certain differences; females' stories were more commonly about defending patients, whereas males' stories had to do with how they managed to negotiate power with those above them in the hierarchy (DeVecchio Good, 1995).

Factors Influencing Professional Socialization

Uutela *et al.* (1982) were interested in the social background and factors influencing the socialization of medical and dentistry students in the University of Helsinki medical faculty. The response rate was 51% (n=89). Of the respondents, two thirds were female and three fourths were dentistry students. The respondents viewed their parents as having had the most influence on their personality and values. The decision to apply to medical school had been made most frequently during high school. Of the respondents, seven out of ten had been accepted by medical school the first time they applied. One third of the respondents had working experience from a health care field before beginning their studies. One fourth thought that they had performed better than average in medical school. When asked about

their satisfaction with work, the respondent said that the most important factors were professional competence, the patients' trust and the possibility to help suffering people. The answers to the question of what kind of doctors the respondents would like to be in the future emphasized professional competence and patient-centeredness. The most important aspects concerning the ideal profession according to the respondents were the chance to develop oneself, being close to people and helping and understanding others. The most important social values (connected to the definition of one's own identity and close relationships) for the respondents were mental balance, real friendship, mature love, self-respect, and freedom. Of the instrumental values, the most important were honesty, responsibility, and open-mindedness (Uutela *et al.*, 1982).

Kumpusalo *et al.* (1994) studied on the graduated doctors' conceptions of professional identity by asking them to assess through a five-point Likert scale on how well certain characteristics applied to themselves as doctors. Five factors representing the physicians' professional identities were identified. There were statistically significant differences in identity between female and male physicians as well as between hospital and primary care physicians. Female physicians and doctors working in primary care identified themselves more as humanists and bureaucrats, whereas male physicians and doctors working in hospitals were more likely to consider themselves as healers and scientists.

Sankala *et al.* (1996) studied the essay answers of volunteer medical students in the University of Oulu concerning their own professional development. Professional development was defined by the respondents as active self-directed training based on working experience. The process was seen to have begun in childhood based on various experiences of illness and health, but the respondents also acknowledged the influence of experiences during basic medical education. Professional development was seen to include, additionally to a growing amount of professional knowledge and skills, also personal growth and an increasing ability to respond to the needs of patients and society. Collegiality and learning from role models as well as role playing were considered essential aspects of the process. Patient contacts and especially feedback from the patients and their relatives were seen as important. Students also mentioned the need to learn to relate to the outside expectations towards doctors and to admit their own limits.

Murto (1996) studied medical students' identity development by interviewing medical students (n=35) at the beginning of their clinical studies. She evaluated the phase of identity development according to Marcia's identity status model (Marcia 1966) and found that most of the students (26.35) were at the stage of moratorium. Only 3 students were at the diffuse state and 6 students at the achieved stage of identity. In defining the factors influencing professional development, Murto (1996) found that the most frequently mentioned issues to be 1) seeing teachers or other doctors work, 2) patient contacts, 3) increasing knowledge, and 4) the medical atmosphere at the hospital. The following items were also mentioned: practicing procedures, peer group activities, personal development, relatives' expectations and illness experiences and collegiality. In the interviews, the students described the process of professional development as taking place gradually. They did not report phases of regression, but mentioned phases of "plateau" and phases of exponential development. They perceived professional development as an inseparable part of personal development.

Niemi and Murto (1996) and Niemi (1997) studied medical students' identities using learning logs and identity status interviews among pre-clinical students during an early patient contact track. They found four types of early professional reflection in the learning logs: "committed reflection", "emotional exploration", "objective reporting" and "scant and avoidant reporting". While comparing the types of reflection to the students' professional views, they noted that "committed reflectors" were the most certain and "emotional

explorers" the least certain group. "Emotional explorers", and "scant reporters" had more often considered quitting the medical program. Based on the identity status interviews, they identified four subgroups including "achieved professional identity", "active exploration of specific alternatives", "vague fantasies and tentative ideas", and "diffuse identity status". When comparing the students' identity status and professional views, they found that the more "exploring" and "achieved identity" students (67%) were more certain about their career choice than the "diffuse" and "vague" identity students (44%) at the end of the pre-clinical training. There was no direct association between professional reflection during the first study year and identity status at the end of the pre-clinical training. "Committed reflectors", however, tended to reach the "achieved identity status" (33%) more often than "objective reporters" (10%).

White, Borges, Geiger (2011) explored whether there is a link between medical students' professional identity development and their specialty choice. Through an online survey, third- and fourth year students at a US medical school were asked to identify the curricular, extracurricular, and personal experiences that they felt influenced their professional identity development, and which of nine known considerations influenced their specialty choice. The students most frequently identified experiences involving humans – as cadavers, patients, colleagues, mentors, and role models – as contributing to their professional identity development. Of the nine contributors to specialty decisions, students highlighted intellectual interest, patient contact, procedural skills, lifestyle, and career opportunities. Narrative responses to both questions consistently emphasized the value of emotionally positive clerkship experiences, patient encounters, role models, and mentors. The abundance and consistency of these responses suggest that positive interpersonal and clinical experiences may influence both professional identity development and specialty choice.

Problem Statement

In medical education research, the emphasis has been on individual learning or assessing the outcomes of learned experiences. The focus of the studies has also been on how individuals' cognitive and practical skills develop, rather than how their personality undergoes change and transformation. The blame is that the process by which medical students become professional has been ignored, as the development of physician's professional identity has commonly been considered a self-evident by-product of learning (Katja Ryyänen, 2001). The literature review shows that several factors are involved influencing identity formation, development, transformation and even crisis. Most studies have mainly focused on the clinical phase when the medical students are in direct contact with the medical context- patients, nurses, cadaver, hospital atmosphere, etc. and when the importance of clinical phase in the formation of professional identity is taken for granted.

The present study, however, aims at investigating the factors contributing to the identity development of medical students in the basic sciences period which precedes the clinical phase.

Significance of The Study

The importance of basic sciences in the path of education for medical students is self-evident. It is in this phase that the students professionally begin to explore about their major, their future and contemplate their personality transformation. As the name denotes, the basicness of this phase is not only applicable to the knowledge they learn but also to the identity development which emerges. The factors that contribute to this emergence are not necessarily identical to those of clinical phase. The author, therefore, aims at gleaning such factors through interacting with the medical students at the site.

Research Questions

- 1- What factors contribute to the professional identity formation of medical students at the basic sciences period?
- 2- Are the contributing factors of the same significance?

Methodology

Participants

The participants of the present study included 41 male and female medicine students within the age range of 21 to 26 at the international branch of Shiraz University of Medical Sciences. They had passed 5 semesters of basic sciences preceding comprehensive basic sciences exam. Entrance to the physiopathology and clinical stage of the education is determined by this comprehensive exam.

Instrument

The authors had been working as the educational advisor of the mentioned participants for 5 semesters. Through the interaction within such period, informal talks, and finally formal interview with the students, we found out that several factors are involved in the development of professional identity of the participants. This gave birth to the construction of the instrument used in the study that was a self-made questionnaire based on the Personality and Social Structure Perspective (PSSP) model (House, 1977). The items in the questionnaire which was based on 5-point Likert scale constituted educational, socio-economical, family, and personal categories. The reliability of the questionnaire was measured through Cronbach's alpha as 0.73.

Procedure

The design of this study was mixed method as both qualitative and quantitative methods were employed. As to the qualitative part, interviews were done with 10 students of the mentioned population to determine the factors contributing to the identity transformation of medical students at the basic sciences period. It is worth mentioning that the constructed quantitative questionnaire rested on the items obtained through the interviews. Once constructed and reliability checked (0.73), the questionnaire was administered on the day the participants were to take their last final exam of their basic sciences course. Data were collected and analyzed using SPSS 20.

Result and Discussion

The number and proportion of the participants is shown in Table 1

Table 1. Gender and parents' job Crosstabulation

		parents job		Total
		physician	non-physician	
gender	male	10	13	23
	female	2	16	18
Total		12	29	41

As to the first research question, the interview results indicated that medical students believe in several factors to contribute to their professional identity formation. These factors

can be divided into 4 main categories of educational, family, socioeconomic, and personal. The educational factors encompassed the participant's attendance in theoretical courses, such as histology, anatomy, physiology, pathology, immunology, etc. as well as the corresponding laboratory sessions. Professors as role models had been mentioned as another contributory factor in the first category. As to the classmates and peers, peer discussions and competitions had been said to be influential as well. The participants had stated that having parents as physicians, and having sick relatives and being in touch with them contributes to their sense of commitment as would-be doctors. Beyond family, the social factors such as known successful doctors acted as their role model. Sick people in need also were thought to have contributed to the sense of commitment. Money making ambitions through practicing as a medical doctor had also been reported as a contributing factor. As to the personal factors, increasing self-awareness, attendance in medical conferences, influence of media, and eventually, fulfilling childhood dreams had been mentioned as the factors that may lead to the enhancement of the professional identity among medical students.

The Table below sheds light on the second research question. It shows that the factors listed in the questionnaire are not of the same significance. That is, some make more contributions than others.

Table 2
Test Statistics

N	41
Chi-Square	99.535
df	13
Asymp. Sig.	.000

a. Friedman Test

The findings given in the rank table below is a strong indicator of the fact that the items classified under personal factor stand first among all factors. That is, personal factors have been the most contributory factor in creating professional identity.

Table 3
Ranks of the contributing factors

	Mean Rank
educational	2.13
familial	2.04
social	2.82
personal	3.01

Table 4
Test Statistics

N	41
Chi-Square	18.934
df	3
Asymp. Sig.	.000

a. Friedman Test

Table 5 reveals that among the items 1-5 (educational), the second item ranks first. This item indicates the contribution of practical laboratory sessions as slightly higher than item 1 which is about the theoretical courses the students take. Item 5 falls last in this category, which means sense of competition with peers is not as influential as discussion with peers (item 4). Item 3 is about the role of professors. It seems that this factor is of average significance.

Having sick relatives is also of average influence as shown by item 7. Item 8 is about the influence of successful doctors in the society on the participants. As compared with item 3 (the professor's effect), the students seem to be influenced far more by the doctors in practice than theoretical professors. Item 9 seems to have the most contribution. It is not very surprising that students are influenced mostly by seeing sick people around them in the society. Item 10, which is about their money-making ambition through practicing, is among the least important factor. Item 11, i.e. self-awareness enhancement through medicine, is among the most influential factors. Among the 4 items at the bottom of the list, none is below average, making this category the most influential one as a whole. In other words, the students tend to enhance their self awareness through their major. Item 12 shows that attending medical conferences and meetings of the kind might pave the way for the students to get to know more about the major, and go through identity transformation as they add to their self awareness. Through media, reading books, newspapers, etc., the students have reported to gain more and more knowledge on the issue. Their fulfillment of childhood dream cannot be ignored, as shown in item 14.

Table 5
Ranks of the items

	Mean Rank
item1	8.76
item2	9.38
item3	5.77
item4	6.28
item5	4.56
item6	5.91
item7	6.56
item8	8.67
item9	9.62
item10	5.95
item11	9.16
item12	7.82
item13	8.49
item14	8.07

Conclusion

As to the concluding remarks, the author found out that medical students, at the period of basic sciences, take care of their personal attitudes toward their professional identity. They seek more awareness through their profession. They also seem to be cognizant about the role of media and other resources to obtain thorough information. Their childhood dreams still have their own effect in this regard. They don't seem to be very sensitive about their peers' performance, nor to the financial aspect of their profession. However, they pay as much attention to their theoretical subjects as to the success of medical doctors in the external world. The students seem to have perceived the fact that in order to evolve into professional doctors, who they see in the society, and to be as prosperous as they are, they need to attentively pursue their basic courses. Visiting sick people, especially their close relatives, seem to provoke their feeling of commitment.

In conclusion, there are several factors that contribute to the medical students' professional identity which are not of the same significance. The medical education authorities and curriculum writers are suggested to consider these factors so that they can train doctors with high professional identity which, in turn, will benefit the patients.

References

- Bakhtin M (1981) *The Dialogic Imagination: Four Essays* in MM Bakhtin and M. E. Holquist (eds), Caryl Emerson and Michael Holquist (transl.). Austin: University of Texas Press.
- Becker HS, Hughes EC, Geer B & Strauss AL (1963) *Boys in white - student culture in medical school*. Chicago: University of Chicago Press,.
- Berzonsky MD (1990) Self-construction over the life-span: A process perspective on identity formation. In GJ Neimeyer & RA Neimeyer (eds.) *Advances in Personal Construct Psychology*, 1, 155-186.
- Bruner J (1990) *Acts of Meaning*. Cambridge, Massachusetts: Harvard University Press,.
- DelVecchio Good MJ (1995) *American medicine: The quest for competence*. Berkeley: University of California Press.
- Downie RS & Charlton B (1992) *The making of a Doctor. Medical education in theory and practice*. Oxford: Oxford University Press.
- Engeström R (1999) Moniäänisyys lääkärin vastaanotolla. Tutkimus työhön sisältyvästä vuorovaikutuksesta. (Multivoicedness in the doctor's surgery. A study on work-related interaction.) In Finnish. Kehittävän työntutkimuksen ja aikuiskoulutuksen yksikkö, Kasvatustieteen laitos, Helsingin yliopisto.
- Erikson EH (1964). *Insight and responsibility*. New York: Norton.
- Erikson EH (1968) *Identity: Youth and crisis*. New York: Norton.
- Erikson EH (1982) Lapsuus ja yhteiskunta. (Childhood and society, 1st edition, 1950). In Finnish. Gummerus, Jyväskylä.
- Freidson E (1970) *Profession of Medicine: A study of the Sociology of Applied Knowledge*. Chicago: The University of Chicago Press.
- Haas J & Shaffir W (1977) The professionalization of medical students: Developing competence and a cloak of competence. *Symbolic Interaction*, 1, 71-88.
- Haas J & Shaffir W (1982) Ritual evaluation of competence. The hidden curriculum of professionalization in an innovative medical school programme. *Work and Occupations*, 9, 131-154.
- Haas J & Shaffir W (1987) *Becoming doctors: The adoption of a cloak of competence*. Connecticut: JAI Press.

- Holland, D., Lachicotte Jr, W., Skinner, D., Cain, C. (1998). *Identity and agency in cultural worlds*. Cambridge: Harvard University Press.
- Jenkins R (1996) *Social identity*. New York: Routledge.
- Katja Ryynänen (2001). *Constructing physician's professional identity-explorations of students' critical experiences in medical education*. Department of Psychiatry, University of Oulu Center for Activity Theory and Developmental Work Research, University of Helsinki Merikoski Rehabilitation and Research Centre, Oulu
- Marcia JE (1966) Development and validation of ego identity status. *Journal of Personality and Social Psychology*, 3, 551-558.
- Melia K.M. (1987) *Learning and Working: The Occupational Socialization of Nurses*. London: Tavistock Publications Ltd.
- Merton RK, Reader GG & Kendall PL (1957). The student physician. *Introductory studies in the sociology of medical education*. Cambridge: Harvard University Press.
- Niemi P (1997) Medical student's professional identity: self-reflection during the preclinical years. *Medical Education*, 31, 408-415.
- Niemi P & Murto M (1996) Oppimis päiväkirjat lääketieteen opiskelijan ammatillisen itsereflektion kuvaajina. (Medical students' learning logs in describing early professional reflection.) In Finnish. *Duodecim* 112, 1792-1801.
- Olmstedt A & Paget M (1969) Some theoretical issues in professional socialization. *Journal of Medical Education*, 44,663.
- Parsons T (1951) *The social system*. London: Routledge and Kegan Paul.
- Puustinen R (1999). Bakhtin's philosophy and medical practice – Toward a semiotic theory of doctor-patient interaction. *Medicine, Health Care and Philosophy*, 2, 275-281.
- Seikkula J (1994) Sosiaaliset verkostot. Ammattiauttajan voimavara kriiseissä.(Social networks - the resource of professional helpers in crises.) In Finnish.Kirjayhtymä, Helsinki.
- Seikkula J (1998). Dialogi on muutos – Voloshinovin ja Bahtinin semiotikka psykoterapian kuvaamisessa. (Dialogue is change – Voloshinov's and Bakhtin's semiotics in describing psychotherapy) In Finnish. *Psykologia* 3/1998.
- Shuval JT (1975) From "boy" to "colleague": Process of role transformation in professional socialization. *Social Science and Medicine*, 9, 413-420.
- Shuval JT & Adler I (1980) The role models in professional socialization. *Social Science and Medicine*, 14A, 5-14.
- Sinclair S (1997) *Making doctors. An institutional apprenticeship*. Oxford and New York: Berg.
- Starr (1982) *Social Transformation of American Medicine*. New York: Basic Books.
- Vygotsky L (1981) The genesis of higher mental functions. In Wertsch (ed.) *The concept of activity in Soviet psychology*. New York: Sharpe, Armonk.
- Wahlström J (1992). Merkitysten muodostuminen ja muuttuminen perhetera peuttisessa keskustelussa. Diskurssi analyttinen tutkimus. (Constructing and changing meanings in family therapy discourse.) Summary in English. *Studies in Education, Psychology and Social Research* 94. University of Jyväskylä, Finland
- Wertsch, J. V. (1991). *Voices of the mind*. Harvard: Harvard University Press.