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Ego Identity Status of Medical Students in Clerkship

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Abstract

Background: Medical students encounter a variety of experiences that have an impact on their emerging professional identity. Clerkship, in particular, presents opportunities for students to consider their career options and decide upon a career path. The process of developing their professional identity begins well before clerkship, however. Anecdotal evidence suggests that interests in medicine begin as early as childhood. This study retrospectively examines the decision-making process clerks make in choosing medicine as a career.

Methods: A total of 76 clerks (36 male, 34 female, 6 not reported) responded to four open-ended and two follow-up questions that measure career interests and pursuits. Questions addressed when and how students developed interests in medicine and alternate careers before beginning medical school. An additional eight closed questions drawn from the Ego Status Extended Objective Measure of Ego Identity Status II (EOM-EIS-II) were administered. Content analyses and inter-rater reliability analyses were conducted to classify students according to Marcia's[1] four ego identity statuses.

Results: Having obtained high inter-rater consistency (Cohen's Kappa coefficient of 0.92), responses to the open-ended questions resulted in the classification of three identity statuses. In total, 49.3% of students were in the 'achieved' (high exploration and commitment to choices) status and 48.1% were in the 'foreclosed' (low exploration but high commitment to choices) status. A small percentage (1.3%) of students were in the 'moratorium'category (high exploration but low commitment to choices), while none of the students were in the 'diffused' (low exploration and low commitment to choices) category.

Conclusions: With approximately half of the students demonstrating a 'foreclosed' status, this study reveals that despite exposure to a variety of careers when attending university, only half of the students had seriously pursued a career outside of medicine. The majority of students, moreover, developed an interest in medicine before adulthood, and did so independently from parental influence.

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Introduction

The beginning of clerkship marks a significant transition in students' progression through their medical preparation.[2] Rather than a preponderant focus on memorizing text book material, students are immersed in clinical settings where they are expected to demonstrate clinical reasoning, clinical skills, knowledge integration, and professionalism. The learning environment becomes less structured than the classroom setting, requiring considerable initiative from the student to pursue opportunities for learning.[3] The transition may provoke anxiety due to uncertainty about their new clerkship roles. This disturbance, however, also promotes exploration of career choices. Having sampled various areas of medicine through their clerkship rotations they can reflect on those settings they deem most desirable. Indeed, "[assessing critical factors in each rotation] allows an active, open, and introspective approach to career choice".[2] Given the opportunity for exploration of particular areas of medicine students have during clerkship, it is an opportune time for them to reflect upon the process of decision-making they made to enter medical education. This study examined clerks' process of decision-making in choosing medicine. Specifically, it examines when they first considered medicine as a career, and whether they had explored various careers outside of medicine, using Marcia's ego identity status as the theoretical framework.[1]

Ego Identity Status

Exploration and commitment have been conceptualized by researchers as dimensions of ego identity status. This construct was first defined by Marcia[1,4] as the development of a person's sense of self, or identity, which is the foundation of ego, or personality development. It is based on Erikson's[5] constructivist theory of identity formation whereby personality emerges from the successful (or unsuccessful) development of competence. Marcia extended this dichotomy by proposing that identity can be qualified according to different statuses. Each status is determined by whether there is active exploration of choices in an area of one's life (e.g., career) as well as commitment to the choice. Exploration and commitment can be arranged on a 2 x 2 matrix, as shown in Table 1. Low exploration and commitment is

termed diffusion, low exploration and high commitment is foreclosure, high exploration and low commitment is moratorium, and high exploration and high commitment is achievement. Someone with the achievement identity status has invested time in contemplating options before making a commitment to pursue specific goals. Although this process of exploration through self-reflection also occurs in the moratorium classification, there is no commitment to a course of action. Foreclosure is based on little exploration but with commitment to a choice, as when someone selects a career without considering other career options. Finally, diffusion identity status is assigned when there is little exploration of options in combination with no goal commitment ("coasting through life"). By examining how people explore and commit to career choices, people's identity status can be classified.[6,7]

Aims of the study

Ego identity theory has not been systematically applied to the study of medical students' decisions about their careers. Niemi,[8] notably, examined the process of identity development among pre-clinical students when considering areas of medical practice. About a quarter of them were classified as achieved. Another quarter of the students were categorized as diffused. Some of the remaining students reportedly had explored various career options, and others were categorized as having "vague fantasies". It is unknown whether some students had made decisions about their career without active exploration (i.e., foreclosure) or had not made decisions and were actively exploring specialty options (i.e., moratorium). Thus, although Marcia's four identity categories were discussed, they were not all utilized in the analyses of the qualitative data. The present study will directly apply all four of Marcia's identity status groupings. Moreover, it is the first study to examine medical students' process of decision-making to begin medical school to become a doctor. The aim of this study was to:

1. Determine when students first considered medicine as a career.

2. Identify the number of students who had explored careers outside of medicine, if any, before beginning medical school.

3. Classify the process of decision-making by students to enter medicine, according to Marcia's theory of ego identity status.

Methods

Participants and procedure

The sample consisted of 76 clerks (36 male, 34 female, 6 sex not reported) of a total of 118 (64.4% response rate) who were attending an information session about clerkship rotations. Most of these students (*n* = 51) were residents of the province in which they attended school, with 11 from outside of the province (14 unknown). The mean age for the sample was 26.5 years (*SD* = 2.91). At the time of participation they were beginning their second month (April) of a one-year clerkship rotation program that typically begins with electives. Students were group-administered a series of open-ended questions by a researcher. They were informed of confidentiality, freedom of participation, and research purposes. The Ethics Review Board certified consent as part of an evaluation of a new course in the students' program. Administration time was approximately 15 minutes.

Measures

Four open-ended questions, with two follow-up questions were administered to clerks. The questions were based on identity status interview questions suggested by Marcia[1] and used in Niemi's[8] study with medical students. First, clerks were asked, "When did you first become interested in medicine?" The second question was, "Growing up, did your parents have any career plans for you for when you became an adult?" The follow-up question was then administered, "If so, what career(s) did they suggest to you?" Third, they were asked, "When in university did you ever consider other areas besides medicine?" This question was followed by, "What were the other areas?" Fourth, they were asked, "Please describe other career experiences you have seriously pursued outside of medicine."

In addition, clerks rated eight closed questions on a 6-point scale from strongly disagree to strongly agree. These were drawn from the Ego Status Extended Objective Measure of Ego Identity Status II (EOM-EIS-II).[9] Although the 64-item questionnaire is not suited for identity classification, several individual items can be used in conjunction with responses from open-ended questions.[10] Two of the eight questions assessed each of the four identity statuses (e.g., achievement: "It took me a while to figure it out, but now I really know what I want for a career.", and "It took me a long time to decide but now I know for sure what direction to move in for a career.") as described in Table 1. Scores range from 1-6, with higher scores indicating stronger agreement.

Content analyses and coding of ego identity status

First, responses to all of the open-ended questions were reviewed to identify characteristics of exploration and commitment. Then a coding system was developed from a random sample of 30 clerks. Using these codes, two raters independently assigned an identity status based on responses to all of the open-ended questions. For example, when respondents indicated that they had become interested in medicine as a child or adolescent, and had not considered other careers while in university, these responses suggest that they developed a commitment to medicine without actively exploring other options. They were, thus, identified as foreclosed. Regarding the achievement status, responses included becoming interested in medicine as an adult and actively exploring careers outside of medicine, thereby suggesting commitment and exploration. This process of content analysis is consistent with managing data from interview-based studies on ego identity status.[7] To assist with classification of ego identity status, these responses were considered along with those from the eight closed questions. The inter-rater reliability of responses to all of the questions was high according to Cohen's Kappa coefficients ranging from .84 to .95, with a mean of .92.

Results

Descriptive results for each of the questions are reported first, followed by classification of ego status. Responses to the question of when students first developed an interest in medicine are shown in Table 2. Almost 20% stated that they became interested as a child, with an additional 42.1% of students displaying interest as an adolescent. Just over a third became interested as an adult. When asked about career plans their parents may have held for them, the majority of students (*n* = 50, 65.8%) indicated that there were no expectations. Of the remaining 26 students whose

parents did hold career expectations, eight (10.5%) stated that their parents suggested work in the medical field, six (7.9%) said that their parents planned for them to work in areas outside of medicine, while the remaining 12 (15.8%) reported that their parents wanted them to have a profession that could be either within or outside of the medical field.

In response to the question about their exploration of careers outside of medicine, the majority of students stated that they considered alternate careers during their undergraduate program (see Table 2). Fewer students considered other careers while in graduate studies, and about the same number of students stated they never considered alternate careers.

Two questions were used to determine the types of careers students held an interest in, or actively pursued. As shown in Table 3, some students (14.5%) stated that they held no interests outside of medicine. A quarter of the students reported interest in various health-related fields such as pharmacy, physical therapy, and genetics. More than a third reported interests in alternate careers such as engineering, journalism, business, and agriculture; and others reported an interest both within and outside of medicine. Of the 41 (53.9%) students who were interested in non-medical careers (or both), 27 (65.9%) pursued an interest outside of medicine. That is, 22 students pursued a non-medical career, and 5 pursued both medical and non-medical careers, as shown in the right column of Table 3. The majority of students (40.8%) in the sample did not, however, actively explore a career outside of medicine. Also, 19.7% stated that they pursued a career in both medical and non-medical careers (6.6%).

Identity status profiles

Based on the above responses, and in combination with ratings of the eight EOM-EIS-II items, the ego identity status of each student was determined. A total of 38 (49.3%) students were identified as achieved, 37 (48.1%) as foreclosed, and 1 (1.3%) as moratorium. No students were classified as diffused. There were no significant sex or age differences between status groups.

1. Achieved. About half of the respondents were classified as achieved as they had reported interests outside of medicine, or were actively beginning or establishing careers outside of medicine. Their parents had not encouraged them to pursue medicine, and the majority of them developed an interest in medicine as an adult, rather than as a child or adolescent. The vast majority of students classified as achieved agreed with the following two statements from the EOM-EIS-II: "It took me a while to figure it out, but now I really know what I want for a career" (*n* = 30, 79.0%) and "It took me a long time to decide but now I know for sure what direction to move in for a career" (*n* = 33, 86.8%). Achieved status is also exemplified by the following statements, "Throughout university I had an interest in music and thought I would become a teacher. Now I am pursuing medicine." Another student stated that he became interested in the medical field after attending an undergraduate course in physiology, which he really enjoyed.

2. Foreclosed. About half of the students were identified as foreclosed as a result of both minimal exploration of alternatives to medicine and a commitment to the profession. Most of them stated they developed an interest in medicine as a youth, and either were not interested or did not pursue a career outside of medicine when in university. For example, "I became interested in medicine when I was 4 years old, and was not interested in other areas and did not consider other careers." Two items from the EOM-EIS-II that measure foreclosure include: "I might have thought about a lot of different jobs, but there's never really any question since my parents said what they wanted", and "My parents decided a long time ago what I should go into for employment and I'm following through their plans." Unexpectedly, few students (*n* = 3, 8.11%) classified as foreclosed endorsed either of these statements.

3. Moratorium. One student provided responses that suggested a moratorium status. A high degree of exploration was reported according to statements such as, "I was interested in psychology and journalism, and actively pursued becoming a pilot." A lack of commitment to medicine was suggested by the following response, "I don't remember when I became interested in medicine - I don't think I really knew what it was. Likely when young (junior high?). If I knew it meant spending nights in hospitals all the time rather than sleeping I might not have bothered." This person also endorsed the statement, "I'm trying to decide how

capable I am as a person and what jobs will be right for me." The other item that measures moratorium, however, was not endorsed, "I just can't decide what to do for an occupation. There are so many that have possibilities."

Discussion

The present study explored the process of decision-making students had followed in choosing to apply for medical school to become a doctor. We determined, specifically, that the majority of students became interested in medicine as a child or adolescent, with about a third developing such an interest in adulthood. This finding is in keeping with Levine et al.,[11] who concluded that developing a professional identity is at the core of students' preparation for medicine and this decision-making process typically is a continuation of thoughts, experiences, interests, and career pursuits that may begin as early as childhood. When in university, about a third of students were interested only in medicine or a related health field, and another third did have some other interests. About two-thirds of those students with alternate interests did pursue another career. Of the total sample, however, almost half stated that they did not pursue a career outside of medicine. Applying Marcia's ego identity classifications to our sample, we determined that about half of the students had explored various careers before firmly committing to medicine (achieved), while the other half had not actively considered various careers prior to selecting medicine (foreclosed). Only one student was classified in the moratorium category and no one was identified as diffused. These results are similar to those of other studies of college students for rates of achievement, but these studies reported lower rates of foreclosure (8-28%), and higher rates of moratorium (12-53%) and diffused (3-30%).[6,12,13] Cross-faculty administration of ego identity questions in future research is needed to detect significant differences and explore possible reasons.

"Identity formation involves a synthesis of childhood skills, beliefs, and the young adult with both a sense of continuity with the past and a direction for the future".[7] Indeed, two thirds of students had developed an interest in medicine before adulthood. Also, these interests developed outside of parents' expectations for them to become doctors as the large majority

stated that their parents did not suggest this type of career. In fact, only three students in the sample stated that their parents selected medicine on their behalf. These early and personalized professional beliefs about a career in medicine may form the foundation for a later commitment to medicine.

When asked about their experiences while in university, about one third stated that they had considered only medicine or a health related field, with only about a third holding an interest in careers outside of medicine in their undergraduate years. Several students identified interests both within and outside medicine. The follow-up question that identifies these other areas reveals, however, that only about one third of students named careers distinctively outside of medicine, such as engineering and the military. Almost a quarter explored fields related to health such as genetics and nursing, with a few students exploring careers both within and outside medicine. Moreover, almost half had not actively pursued any alternate careers. These combined results suggest that despite exposure to numerous career opportunities, which university attendance affords,[14] almost half of the students had not seriously pursued a career other than medicine. This limited exploration may be a result of early interest in medicine in their youth, independent from parental influence.

The above results are based on analyses of responses to individual questions. Using Marcia's classification scheme, we examined the above responses across questions for each student. These responses, combined with the EOM-EIS-II guided classification of each student's ego identity status. Accordingly, only one student reported a lack of commitment to medicine, and in combination with active exploration, was classified in the moratorium status. This person seemed dissatisfied with his career choice, and is considering other opportunities. No students were identified as diffused. The vast majority identified a commitment to medicine, resulting in two primary categories. First, about half of the students were identified as achieved, as they had reported some exploration of a career outside of medicine before making a commitment. Thus, in comparison to other careers, medicine seemed the most desirable option. Many students throughout university believed that they would actually pursue an alternate career but shifted their focus to medicine

later. These students, according to Marcia,[4] have gained a successful resolution to their concerns about a professional identity and are likely to gain satisfaction from their decision.

The remaining half of the students had foreclosed on their career decisions. While they had also made a commitment to medicine, they did so without active exploration. They were neither interested in nor sought other career options when in university. Some of them had decided on medicine as a child. Despite this early decision, few students thought their choice was influenced by their parents. The foreclosure items of the EOM-EIS-II measure only parental influence, however; close inspection of them suggest that they actually measure parental control. Consequently, these items do not seem to be accurate indicators of foreclosure. According to Marcia, people who have foreclosed are not likely to feel anxious about their careers, but may form less meaningful commitments to their choices and are at risk of experiencing an identity crisis.[7] If alternative goals are evaluated subsequent to entering the medical work force and deemed desirable, someone who had foreclosed early in their decision-making may end up leaving the profession.

While in the clerkship phase of their undergraduate medical education, students must set a direction for their future. This pressure to declare a career choice, combined with uncertainty about competency, places students at high risk for depersonalization, or a sense of detachment from their personal identity.[15] It is critical, therefore, that we understand students' process of deciding upon a specialization in medicine. This study serves as the foundation to the next phase of our research where we will examine the continuity of decision-making students engage in before medical school and at critical decision-making points throughout medical school. As well, we intend to determine whether this decision process is related to academic performance, burnout, and development of professionalism during medical school, as suggested in other non-medical studies.

Study limitations should also be considered. These results were generated by students attending one medical school and therefore, may not generalize to students studying medicine elsewhere. Most importantly, our school is three years in duration and clerks are forced to make specialty choices early, often before sampling all of the various clerkship rotations. For this reason, students who apply to our school may possess a career decision making process that is different from students in a 4-year program. Applying similar methodology to explore the career decision making process of students attending a 4-year medical school would help to clarify this issue.

We used many strategies to maximize the accuracy of status classification. First, responses from open-ended questions about career considerations were coded independently and reliably, according to high inter-rater reliability. Also, almost all responses provided sufficient details to be coded (< 2% not coded). Then endorsement of specific statements representative of each status was considered. All of these responses were examined for evidence of commitment and exploration. An in-depth interview would have provided more information that could be used to substantiate the classifications but was beyond the scope of this study. This study presents a preliminary investigation using retrospective reports into career decision-making processes of students.

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Table 1. Marcia's Ego Identity Status

	Exploration	
Commitment	High	Low
High	achieved	foreclosed
Low	moratorium	diffused

Table 2. Frequency (percentage) of responses to question "when interested in careers" (*n* = 76)

When first interested in medicine		When in university did you consider careers outside medicine	
Child (0-11 yrs)	15 (19.7)	Undergrad program	50 (65.8)
Early adolescent (12-15 yrs)	6 (7.9)	Graduate program	12 (15.8)
Late adolescent (15-17 yrs)	26 (34.2)	Never considered	11 (14.5)
Adult (>18 yrs)	27 (35.5)	Missing/not coded	3 (3.9)
Missing/not coded	2 (2.7)		

Table 3. Frequency (percentage) of responses to question "interests in medical or other careers" (*n* = 76)

Careers of interest outside of medicine when in university		Careers pursued outside of medicine	
None	11 (14.5)	None	31 (40.8)
Health-related	19 (25.0)	Health-related	15 (19.7)
Outside medicine	30 (39.5)	Outside medicine	22 (28.9)
Both in/outside medicine	11 (14.5)	Both in/outside medicine	5 (6.6)
Missing/not coded	5 (6.5)	Missing/not coded	3 (4.0)