

Knowledge of and Attitudes toward Medical Professionalism among Students and Junior Doctors in Trinidad and Tobago

D Peters, SS Ramsewak, FF Youssef

ABSTRACT

Background: The past decade has seen an increasing focus on professionalism within the medical school curriculum. This reflects the growing demand for doctors who demonstrate empathy and uphold the altruistic values of the Hippocratic Oath. Such is often challenged by the resource-constrained environments of developing nations requiring uniquely tailored interventions within these regions.

Purpose: As part of a wider effort to develop training of medical professionalism at our institution, an initiative was pursued to assess the current knowledge about and attitudes toward medical professionalism.

Methods: The study was designed as a cross-sectional descriptive study of fourth and fifth year medical students and junior doctors. A questionnaire was adapted and revised from a previously published study. Questions were grouped into categories pertaining to knowledge about professionalism and attitudes toward professionalism. Overall, 191 questionnaires were analysed (168 students and 23 doctors).

Results: Junior doctors' scores were higher than medical students for all knowledge subscales but scores on the attitude subscales were significantly lower than medical students. Overall, in both groups, attitude scores were higher than knowledge scores. There was an overall trend of decreasing attitude scores as persons progressed through their training years and into clinical practice.

Conclusions: Results demonstrate limited knowledge about medical professionalism but good attitudes toward this trait. Taken together, this perhaps highlights a receptivity toward more formal training within this area that is also justified by the marked decline in attitude scores over time.

Keywords: Caribbean, ethics, medical professionalism, medical students

Conocimiento y Actitudes Hacia el Profesionalismo Médico entre los Estudiantes y los Médicos Jóvenes en Trinidad y Tobago

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RESUMEN

Antecedentes: La década pasada ha visto un creciente interés en el profesionalismo en el currículo de la facultad de medicina. Esto refleja la creciente demanda de médicos que demuestren empatía y defiendan los valores altruistas del juramento hipocrático. Estos valores son con frecuencia desafiados por las restricciones en recursos que caracterizan el contexto de los países en vías de desarrollo, en los cuales se hacen necesarias intervenciones de carácter único, diseñadas a la medida de las condiciones de estas regiones.

Propósito: Como parte de un esfuerzo más amplio para desarrollar la formación del profesionalismo médico en nuestra institución, se tomó la iniciativa de evaluar los actuales conocimientos y actitudes en relación con el profesionalismo médico.

Métodos: El estudio fue diseñado como un estudio descriptivo transversal de estudiantes de cuarto y quinto año de medicina y los médicos jóvenes. Se revisó y adaptó un cuestionario tomado de un estudio previamente publicado. Las preguntas fueron agrupadas en categorías relativas a los conocimientos y las actitudes en torno al profesionalismo. En total, se analizaron 191 cuestionarios (168 estudiantes y 23 médicos).

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Resultados: *Las puntuaciones de los médicos jóvenes fueron más altas que las de los estudiantes de medicina para todas las subescalas de conocimiento, pero las puntuaciones de las subescalas de actitud fueron significativamente más bajas que las de los estudiantes de medicina. En general, en ambos grupos, los puntajes de actitud fueron superiores a las puntuaciones de conocimiento. Hubo una tendencia general decreciente de las puntuaciones sobre la actitud en las medida en que las personas progresaban a través de sus años de formación y se adentraban en la práctica clínica.*

Conclusiones: *Los resultados demuestran un conocimiento limitado sobre el profesionalismo médico, pero apuntan a buenas actitudes hacia este rasgo. En conjunto, esto quizás destaca una receptividad hacia una formación más formal dentro de esta área, lo que también se justifica por la marcada disminución en las puntuaciones de actitud a medida que pasa el tiempo.*

Palabras claves: Caribe, ética, profesionalismo médico, estudiantes de medicina

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INTRODUCTION

Within the past few years, medical professionalism and its importance as part of the curriculum for medical students has become a major issue not just within the medical community but also in the public's view. This reflects the recognition that the training and practice of medicine cannot solely rest upon academic and technical skills but must also focus upon the character, personal integrity and what has been called the 'humanistic side of medicine'. It also recognizes that unprofessional conduct cannot be managed simply by punitive measures and statements of oaths but requires formal instruction within the wider context of holistic human development (1).

This shift is a global phenomenon. In the United States of America (USA), the Medical Colleges Admission Test (MCAT) will soon examine students in ethics, psychology and sociology as well as the more traditional biological and physical sciences. Similar efforts are ongoing in the United Kingdom (UK), Europe, the Far East, India and the Middle East (2–4).

However, such changes are at their infancy within the English-speaking Caribbean, a region that is home to approximately 13 million persons spread across fourteen nations, the majority being small island developing states (SIDS). Despite governments' attempts to provide universal healthcare coverage, the health systems of these nations continue to face chronic staff shortages and lack the critical infrastructure necessary to service the needs of the population. This has led to a general dissatisfaction with the public health system and the emergence of a two-tier model in which persons within the lower socio-economic groups make use of public health facilities, whereas everyone else strives to access private healthcare where costs have significantly increased over the past decade. In this environment, attention to professionalism finds particular relevance as the medical profession is often accused of abusing its position of 'power' and no longer meeting the altruistic ideal suggested by standard oaths and charters.

Medical training for Caribbean nationals is primarily conducted by The University of the West Indies (UWI) with three lead centres in Jamaica, Barbados and Trinidad and Tobago. While medical ethics has occupied a small part of the

formal curriculum for many years, medical professionalism has remained largely within the domain of the 'hidden curriculum', which is defined as the process of socialization and cultural assimilation experienced by students as a byproduct of the formal educational curriculum (5). It describes the norms, values and beliefs that are demonstrated by the behaviour of clinical staff but may not be necessarily verbalized. Recognizing this and the changing role of the doctor in society resulting from demands by the general public for a doctor who is more empathetic, better able to communicate and more willing to do so, a committee was established at our institution to consider the issues surrounding medical professionalism within the Caribbean and how best to implement formal training within this area (6).

As part of this wider effort to develop teaching and training of medical professionalism within the Caribbean, we initially sought to assess the current knowledge about and attitudes toward medical professionalism among clinical medical students and junior doctors (those who have graduated for less than two years). It is anticipated that this research can "serve as a needs assessment to guide development of relevant and effective curricular offerings" (7). In addition, if medical professionalism is indeed to become an integral part of the curriculum then assessment is a vital tool for monitoring the effectiveness of the programmes being implemented. Previous work in this area using a cohort of matriculating students noted that students' attitudes toward professionalism are generally positive, though in some cases attitudes and knowledge do not line up with current definitions of professionalism (7). Another study from Australia also concluded that there were gaps in students' knowledge as it pertains to medical professionalism and recommended that these be addressed by formal instruction (8). It is therefore proposed that the findings from this study will help guide the development and implementation of a culturally sensitive training programme in medical professionalism and ethics across the medical school.

SUBJECTS AND METHODS

Approval for this study was granted by the Ethics Committee of the Faculty of Medical Sciences at our institution. The study

was designed as a cross-sectional descriptive study that sought to assess the knowledge of and attitudes toward medical professionalism among clinical medical students and junior doctors (less than two years post-graduation). It should be noted that our medical programme is an undergraduate programme that lasts five years, followed by a one-year internship. Clinical hospital-based training in which students interact with patients occurs in years four and five.

Sampling

Our sample was drawn from the population of clinical medical students in the fourth and fifth years of training. There were approximately 150 students in both classes, giving a total population of 300 students. We made use of convenience sampling to gather the data, with students being contacted in class and being asked to voluntarily participate in the study. Junior doctors were contacted at their workplace through representative peers and also asked to voluntarily participate.

In all cases, persons were required to provide informed verbal consent before being provided with a questionnaire. Persons were allowed to take the questionnaire away and return it at a later date. The questionnaire did not require any identifying information and in this way confidentiality of the participants' data was assured.

A total of 307 questionnaires were distributed with 257 of these being given to medical students and 50 to junior doctors (response rate of 70% for medical students and 46% for junior doctors). Fourteen questionnaires were not analysed because significant parts of the survey were incomplete. The final sample was 191. Of this, 23 (12%) questionnaires were from junior doctors and 168 (88%) from medical students. The demographics of both groups are summarized in Table 1.

Table 1: Demographic data of the sample group

	Medical students n (% of sample)	Junior doctors n (% of sample)
Age (year)		
18 – 24	140 (83)	4 (17)
> 24	27 (17)	19 (83)
Gender		
Male	56 (33)	11 (48)
Female	112 (67)	12 (52)
Ethnicity		
African	41 (24)	2 (9)
Indian	106 (63)	14 (61)
Mixed	20 (12)	9 (30)
Other	1 (< 1)	0 (0)

Questionnaire

The questionnaire, adapted from a previous study (7), required approximately 30 minutes to complete. It sought to assess two areas: (i) knowledge of medical professionalism and (ii) attitudes toward attributes of professionalism in medicine. It contained four sections; two pertained to knowledge of professionalism (vignettes on professionalism in medical prac-

tice and multiple choice questions) and two to attitudes of professionalism (level of agreement scales and semantic differential scales). The attributes of professionalism were derived from Swick's definition of professionalism (9). The maximum score in all categories was 100. Participants also provided demographic information and were asked to briefly note their reason for pursuing medicine as a career.

Statistical analysis

Data were analysed based on knowledge and attitude attributes (7). The knowledge attributes were: humanism, managing complexity and uncertainty, professional responsibility, subordinating self-interest, and professional commitment. The attitude attributes included humanistic values, ethical and moral values, self-reflection, accountability and subordinating self-interest. Data were analysed using the statistical software programme SPSS version 20.0. Descriptive statistics were calculated for each attribute (mean \pm standard deviation) and differences in means were tested using analysis of variance (ANOVA). Post hoc analysis was carried out using Tukey's post hoc test. The α error was set at $p < 0.05$.

RESULTS

The average total knowledge score was 51.0 ± 9.5 . The average score for the knowledge attributes are summarized in Table 2. On comparing the total knowledge score of junior doctors

Table 2: Knowledge and attitude scores (mean \pm standard deviations) including attributes

	51.0	9.5
Total knowledge score		
Professional responsibility	62.5	20.2
Complexity	57.4	15.7
Humanism	57.2	24.5
Subordinate self-interest	55.2	19.8
Professional commitment	40.7	17.7
Total attitude score	71.1	13.6
Accountability	69.6	19.5
Humanistic values	79.0	20.0
Ethics and morals	78.3	17.6
Self-reflection	72.6	20.1
Subordinate self-interest	63.6	19.1

and medical students, a significant difference was noted ($p < 0.05$), with junior doctors scoring higher (55.2 ± 6.8 vs 50.5 ± 9.7). Junior doctors' scores were higher on all knowledge subscales (Fig. 1) and statistically significant for subordinate self-interest ($p < 0.05$) and professional responsibility ($p < 0.05$). There was no difference in total knowledge scores between the fourth-year and fifth-year medical students.

Attitude scores were generally higher than knowledge scores with the total attitude score being 71.1 ± 13.6 . The attitude attributes ranged from 79.0 for humanistic values to 63.6 for subordinate self-interest (Table 2). However, in this case, junior doctors' scores were significantly lower than medical students (65.5 ± 11.7 vs 71.9 ± 13.7 ; $p < 0.05$); this being

reflected in all sub-scales and significantly so for humanistic values ($p < 0.01$) and ethics and morals [$p < 0.05$] (Fig 1).

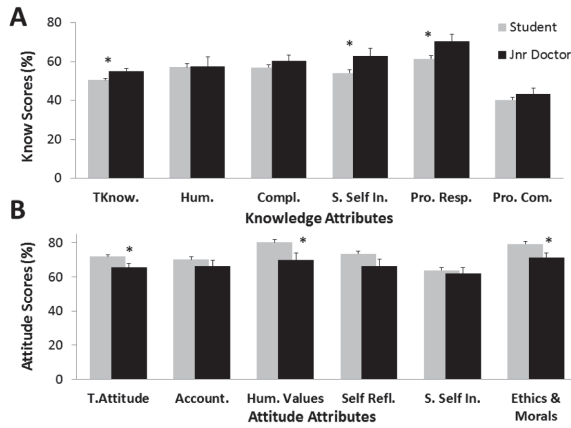


Fig. 1: Bar graph demonstrating the knowledge scores (A) and attitude scores (B) for junior doctors and medical students. Junior doctors demonstrated a significantly higher total knowledge score and also scored significantly higher on the attributes of subordinate self-interest and professional responsibility. When examining the attitude scores, junior doctors scored significantly lower on the total attitude score and the attributes of humanistic values and ethics and morals. * = $p < 0.05$.

When comparing the attitude scores between students in their fourth year of study (first clinical year) and in their fifth and final year of study (second clinical year), final year students scored significantly lower on total attitude score (69.5 ± 15.2 vs 75.6 ± 9.9 ; $p < 0.01$). Thus, there was an overall trend of decreasing attitude scores as persons moved through their university years and into clinical practice (Fig. 2).

All attitude attributes also demonstrated this significant difference between fourth and fifth year students except subordinate self-interest which was significant only at the 10% level ($p < 0.01$). The correlation between the total attitude

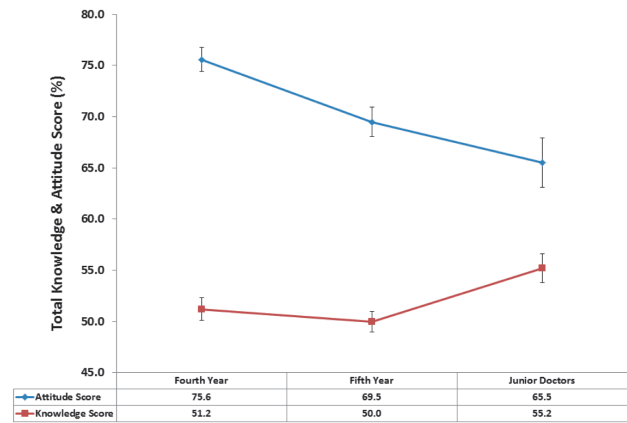


Fig. 2: Line graph demonstrating the change in knowledge scores and attitude scores over time from fourth year medical students to young doctors. While knowledge scores increased after graduation, attitude scores showed a steady decline from year to year. * = $p < 0.05$.

score and the total knowledge score was low and not significant (Pearson’s correlation $r = 0.124$; $p > 0.05$).

With respect to gender, total knowledge score in females was significantly higher than males (52.5 ± 8.6 vs 48.4 ± 10.6 ; $p < 0.01$). This was reflected in the attribute scores in which females scored higher on all five categories and significantly so for subordinate self-interest ($p < 0.05$) and professional responsibility ($p < 0.01$). There were no differences for the total attitude score or any of the attitude attributes between males and females, $p > 0.05$.

Responses to the question, ‘my reason for pursuing medicine is’ were coded, analysed and then broadly categorized into four main themes: (i) serving the society, (ii) interest, (iii) family motivation, and (iv) wealth. Frequencies, percentages and excerpts of responses in these categories can be seen in Table 3. ‘Serving society’ and ‘interest’ proved to be the two most frequent reasons for pursuing medicine.

Table 3: Highlighting responses to the question, “my reason for doing medicine is:” Responses are presented as frequencies and percentages of totals and excerpts of comments

Reason: Service

Frequency: 76

Percentage: 39.3

“My mother died from cancer and since then I had a drive to help those that cannot help themselves.”

“As clichéd as it may sound, I selected this field in order to help persons. I am especially interested in the less fortunate and the elderly who are poorly cared for.”

“To help alleviate the need of my community for qualified health professionals.”

“Medicine seems to be the best way to achieve my goal of wanting to help people.”

Reason: Interest

Frequency: 64

Percentage: 33.2

“Something I wanted to do from a child.”

“Medicine is dynamic, exciting and fun.”

“It is a reputable career which involves patient interaction on a daily basis. It is both challenging and fulfilling.”

“This is my calling in life, no other career would make me happier.”

Table 3 Cont'd: Highlighting responses to the question, "my reason for doing medicine is:" Responses are presented as frequencies and percentages of totals and excerpts of comments

Reason: Family motivations		
Frequency: 5	Percentage: 2.6	
<i>"Was exposed as a child to medicine (father is a doctor) and science (mother biology teacher) so I always loved it."</i>		
<i>"Uncle is a doctor and his professional life seems nice."</i>		
<i>"Grandmother wanted her grandchildren to be doctors."</i>		
<i>"To emulate my brother."</i>		
Reason: Wealth		
Frequency: 5	Percentage: 2.6	
<i>"To help people and make money."</i>		
<i>"To retire at 45."</i>		
<i>"Wants money."</i>		
Reason: Uncategorized		
Frequency: 6	Percentage: 3.1	
<i>"Needed something where I could use my academic excellence."</i>		
<i>"Nothing else I could think of doing."</i>		
<i>"Personal reasons."</i>		
Reason	Frequency	Percentage (%)
No reason given (blank)	37	19.1
Service	76	39.3
Interest	64	33.2
Family motivations	5	2.6
Wealth	5	2.6
Uncategorized	6	3.1
Total	193	100

DISCUSSION

The main findings of our study are that medical students and junior doctors in Trinidad and Tobago demonstrated limited knowledge as it pertains to medical professionalism but higher attitude scores, which suggests a positive attitude toward medical professionalism. These scores are significantly lower than those reported when the original study was conducted in the USA (7). While the limited number of junior doctors sampled makes generalizations about the total population of junior doctors difficult, this is not true for the medical student sample. In this case more than 50% of clinical medical students were sampled and thus it is reasonable to conclude that these scores give a good picture of the knowledge and attitudes within this group.

This gap is not totally surprising as professionalism is not currently a major component of the medical curriculum at our medical school. It is also worth noting that in our context, the majority of students enter medical school directly from high school at the age of eighteen. Thus, they do not have the benefit of a formal undergraduate education, as is the case in the USA, where many of these issues of professionalism and ethics may have been highlighted, if not formally taught. Nevertheless, the results align themselves with broader trends reported in the literature.

The comparison of the original study and our study, along with similar research around the globe, provides for a number of interesting observations. First of all, considering the USA and Trinidad and Tobago juxtaposes a developed and developing country, we had difficulty finding studies assessing medical professionalism in developing countries and thus our study provides needed results from a global perspective. In this light, research on cultural similarities and differences with regard to medical professionalism in a multi-regional study including North America, UK, Europe and Asia, found that there was agreement on the essentialness of a majority of professional attributes, indicating the universality of these attributes (10).

Another study in Korea noted that medical professionalism with regard to knowledge, skills and attitude was below average with a slight increase in attitude scores in later years, though still not satisfactory (11). This further reinforces the assertion that though the issues pertaining to medical professionalism are universal, scores in developing nations may be somewhat reduced. More studies on the developing world are required to more confidently corroborate this. The original study concluded that "*students enter medical school with positive attitudes towards professionalism attributes, but that they do not necessarily know how these attributes function in prac-*

“*tice*” (7). Attitude scores were, as a result, higher than knowledge scores. This was also the case with our study and thus a similar conclusion could be considered but the gap between attitude and practice may be exaggerated.

The use of both medical students and junior doctors as participants allowed for some interesting comparative analysis. For example, junior doctors’ knowledge scores were significantly higher than student scores even though they would have received no further training in this area. This adds support to the idea that knowledge about professionalism is gleaned from experience and the power of the ‘hidden curriculum’ (12). It also supports reports from other work which highlight the need for professionalism to be taught in a multi-model manner that includes the use of case studies, vignettes and learning within a social context (13, 14). These findings are useful as our study represents the first steps toward the establishment of a formal curriculum in medical professionalism thus highlighting key aspects of the development trajectory.

Attitude scores reflected an opposite trend to that of knowledge scores, with decreasing scores from fourth year students to junior doctors (Fig. 2). This trend which has been reported elsewhere (15–18), is somewhat worrying and needs further investigation. Possible reasons could be burnout and depersonalization which are clearly recognized as a problem for junior doctors (19, 20). Alternatively, this could reflect a failure of the medical education system to adequately prepare students for the challenges they will face when confronted with the demands of clinical practice. Hren *et al* (18) report a regression in moral reasoning across the clinical years which may reflect students’ inability to cope with the complex ethical and professional demands placed upon them. It is expected that such regression may only be exacerbated in poorly resourced environments and where there is a lack of formal instruction concerning these issues.

What is also worth reflecting on, in this context, is the power of the hidden curriculum and what potential influence this is having on young doctors. Woloschuk *et al* (17) found a similar decrease in attitude throughout medical school and suggested it may be due to a loss of idealism and/or the effect of the hidden curriculum. A decrease in moral development throughout medical training was also noted in Canada where they hypothesized that the hidden curriculum may be hindering moral reasoning as opposed to promoting it (16). Unfortunately within our context and the wider developing world, these issues have not been explored sufficiently and further research needs to be done to understand if the hidden curriculum is primarily negative or positive within this context. The present study, along with others, has generally found positive attitudes toward medical professionalism among students, especially in earlier years (15, 21). This positive attitude is further highlighted when the responses concerning participants’ reasons for pursuing medicine are considered (Table 3). Therefore, it is reasonable to conclude that the majority of students enter medical school with noble intent and as such training in professionalism will be well received and embraced by

the majority. It is important to note that knowledge and attitude scores demonstrated little correlation, highlighting the importance of training that focusses upon self-awareness, coping skills, attitudes and behaviours and not only the provision of information.

Our study is limited by the difficulty found contacting junior doctors who were willing to participate in this study. Overall, only fifty surveys were distributed and even among this group, less than half eventually completed the survey. Thus the sample of junior doctors may not be representative of the population of junior doctors in Trinidad and Tobago. Comparisons between the two groups are limited by the small sample size of the junior doctors. In addition, we made use of a self-report questionnaire in which participants may have responded based upon expected societal norms. Thus, there is a need for further research in which these scores are correlated with actual behaviours in clinical practice. It is also worth noting that the Trinidad and Tobago cultural milieu is vastly different from the USA where this instrument was originally developed based upon accepted definitions of professionalism in that environment. However, Chandratilake *et al*’s multi-region study (10) observed that there was mutual consensus of the high importance of integrity, reliability, dependability and showing compassion across all regions and it is reasonable to assume that this would be the case in the Caribbean.

In conclusion, we embarked upon an assessment of our students’ and junior doctors’ knowledge of and attitudes toward medical professionalism as the first step in developing and modernizing the curriculum in medical professionalism and ethics. Our results demonstrate limited knowledge about medical professionalism but good attitudes toward the topic which corresponds to other studies conducted elsewhere. We suggest this highlights a desire and receptivity toward more formal training within this area. We also demonstrate a potential decline in attitudes to medical professionalism across time. Again, this corroborates a global trend and highlights the pitfalls in the current methodology of instruction at our school, which depends heavily on the hidden curriculum and appears to currently be failing to meet the needs of our young graduates.

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