

Factors Which Affected Medical Professionalism in Internal Medicine Residents; Any Differences between the First and Last Year Residents

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Objective: Medical professionalism is one of core competencies for medical students and residents. It may be improved during the residency training. The present study aimed to evaluate if factors affected medical professionalism in internal medicine residents; any differences between the first and last year residents.

Materials and Methods: The present study was a cross-sectional study and conducted at Department of Medicine, Faculty of Medicine, Khon Kaen University. The residents in internal medicine year 1 (PGY1) and year 3 (PGY3) were recruited in the study. All participating residents were informed about medical professionalism by the researchers and provided a self-reported questionnaire regarding factors associated with their medical professionalism in practice. The questionnaire comprised of ten potential factors which affected medical professionalism. The residents were asked to rate each factor by using a range of 0 to 10; while 0 was the least and 10 was the most. Scores of each factor were compared between both groups (PGY1 and PGY3) by descriptive statistics.

Results: There were 15 PGY1 and 14 PGY3 participated in the study. Out of 10 factors, there was no significant different between both groups. The PGY1 scored knowledge as the highest score which affected their medical professionalism (9.20/10), while the PGY3 ranged personality and attitude as the most influential factor for medical professionalism (9.07/10).

Conclusion: Factors which affect medical professionalism in internal medicine residents were no different between the first and last year residents.

Keywords: Knowledge, Personality, Attitude

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Epstein and Hundert define professional competence as the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served⁽¹⁾. It has been announced by several organizations regarding requirements of medical professionalism such as the Accreditation Council for Graduate Medical Education, American Board of Internal Medicine Foundation, the American College of Physicians Foundation, or the European Federation of Internal Medicine^(2,3). Medical students, residents, or physicians need to have the medical professionalism for good patient care in their practice.

Medical professionalism can be taught and assessed in several ways but may be multi-dimensional and longitudinal^(4,5). It may be an interaction between physician's personality and social structure⁽⁴⁾. Therefore, several factors may be influenced with medical professionalism particularly during residency training⁽²⁾. As learning medical professionalism may require time and training, the present study aimed to evaluate if factors affected medical professionalism in internal medicine residents; any differences between the first and last year residents.

Materials and Methods

The present study was a cross-sectional study and conducted at Department of Medicine, Faculty of Medicine, Khon Kaen University. The residents in internal medicine year 1 (PGY1) and year 3 (PGY3) were recruited in the study. All participated residents were informed about medical professionalism by the researchers and provided a self-reported questionnaire regarding factors associated with their medical professionalism in practice. The questionnaire

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was comprised of ten potential factors including knowledge, personality and attitude, role model by attending faculty members, senior physicians, colleagues, social, online media, the medical council, sued cases, and family. The final question was asking if all factors affecting their medical professionalism in overall. The residents were asked to rate each factor by using a range of 0 to 10; while 0 was the least and 10 was the most. Scores of each factor were compared between both groups (PGY1 and PGY3) by descriptive statistics. A significant factor was defined if a *p*-value was less than 0.05. All statistical analyses were computed by using STATA software version 10.0 (College Station, Texas, USA).

Results

There were 15 PGY1 and 14 PGY3 participated in the study. Out of 10 factors, there was no significant different between both groups. The PGY1 scored knowledge as the highest score affected their medical professionalism (9.20/10), while the PGY3 ranged personality and attitude as the most influential factor for medical professionalism (9.07/10). The second and third rank for PGY1 were role model by attending faculty members (8.87) and personality and attitude (8.67), while the PGY3 ranked knowledge (8.93) and role model by attending faculty members (8.64) as the second and third highest score (Table 1).

The lowest score for PGY1 and PGY 3 were medical council (6.80) and online media (6.79), respectively. There was another factor with the score less than seven in PGY1 and PGY3 group; online media (6.93) and medical council (6.86). In overall, these 10 factors affect the PGY1 and PGY3 medical professionalism with an overall score of 7.40 and 7.93, respectively.

Discussion

Both PGY1 and 3 rated that the 10 studied factors had overall effects on their medical professionalism about 70 to 80% (overall score of 7.40 to 7.93). These results may imply that there are other factors that may influence their medical professionalism; not in the studied factors such as

experience, culture, or personal communication skill^(4,6). It might be a gap for teaching and assessing medical professionalism in the residents.

The PGY1 group had the highest score on knowledge at 9.20. This score may reflect that the PGY1 residents require good knowledge to provide good patient care as a part of medical professionalism. As previously published, there are ten commitments for physicians on professionalism by the ABIM⁽³⁾. There are three commitments that may be associated with physician's knowledge including commitment to professional competence, improving quality of care, and scientific knowledge.

In contrast, the PGY3 may have more knowledge than the PGY1 group, so they rated personality and attitude as the highest factor associated with their medical professionalism (Table 1) at 9.07. Physician personality and attitude may effect on five commitments by the ABIM including honesty with patients, patient confidentiality, maintaining appropriate relations with patients, maintaining trust by managing conflicts of interest, and professional responsibilities. There is no right or no wrong for what the PGY1 or PGY3 rated on these 10 factors. Note that all 11 factors are not statistically significant between both groups. As mentioned earlier, medical professionalism can be improved by training and experience.

In conclusion, factors affect medical professionalism in internal medicine residents were not significantly different between the first and last year residents.

What is already known on this topic?

Medical professionalism may develop by experience and training.

What this study adds?

Factors affect medical professionalism in the first- and last-year residents in internal medicine were not different. The first-year residents scored knowledge as the highest score affected their medical professionalism, while the PGY3 ranged personality and attitude as the most influential factor for medical professionalism.

Table 1. Factors associated with medical professionalism in medical resident year 1 (PGY1) and year 3 (PGY3) participated in the medical professionalism study

Factors	PGY1, n = 15	PGY3, n = 14	<i>p</i> -value
Knowledge	9.20 (0.86)	8.93 (1.98)	0.568
Personality and attitude	8.67 (2.29)	9.07 (2.40)	0.193
Role model by attending faculty members	8.87 (1.13)	8.64 (2.17)	0.746
Senior physicians	8.40 (1.24)	7.79 (2.08)	0.516
Colleagues	7.60 (1.35)	7.21 (2.46)	0.982
Social	7.73 (1.75)	8.29 (1.64)	0.396
Online media	6.93 (1.49)	6.79 (2.58)	0.912
Medical council	6.80 (2.31)	6.86 (2.71)	0.982
Sued cases	7.13 (1.88)	7.29 (2.40)	0.756
Family	7.60 (2.13)	7.93 (2.07)	0.247
In overall	7.40 (1.06)	7.93 (0.83)	0.156

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Potential conflicts of interest

The authors declare no conflict of interest.

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