# Conceptualization and development of professionalism among general surgical residents

# Ahsan Nasim<sup>1</sup>, Abid Ashar<sup>2</sup>

<sup>1</sup>Associate Professor, Surgical Unit-II Jinnah Hospital / Allama Iqbal Medical College Lahore, <sup>2</sup>Professor, Oral and Maxillofacial Surgery, Fatima Memorial Medical and Dental College Lahore

Correspondence to: Dr. Ahsan Nasim, Email: ahsannasim@yahoo.com

#### **ABSTRACT**

Background: Medical professionalism is the association among doctors, patients and the general public as the whole. This study explores how development of attributes of professionalism is conceptualized by postgraduate surgical residents in a teaching hospital in Pakistan.

Study design: Phenomenological qualitative study in constructivist paradigm.

Methods: A qualitative study was conducted in department of general surgery, Jinnah Hospital Lahore, Pakistan from June 2017 to July 2018. Purposeful homogenous sampling technique was used to include 15 final year residents, being trained in four surgical units, as research participants and sample size was based on data saturation. After taking informed consent, 15 semi structured one on one interviews were conducted. Audio taped, transcribed and analyzed through thematic analysis. The codes developed after the first interviews were refined in the follow-up interviews and latest ideas extracted until saturation. Where needed researcher gave some questions in follow-up to clarify the views of participants.

Results: Three broad themes identified were "attributes of professionalism", "ways to develop professionalism" and "barriers to development of professionalism". The professionalism attribute conceptualized by the residents included altruism, respect for others, accountability, excellence, duty, confidentiality, commitment, and honor and integrity. The participants felt that professionalism develops maximally through observation; mentorships and role modeling; self-learning along with innate behavior and family training. Absence of a professionalism curriculum, lack of supervision along with workload and long duty hours were deemed as barriers to professionalism development.

Conclusion: Inculcating medical professionalism among General Surgery residents requires comprehensive strategy including didactic sessions to improve professionalism concepts, providing a strong mentorship and role models and providing improved working conditions including reduced workload and duty hours.

Professionalism, Surgical residents, Attributes, Development, Barrier

#### INTRODUCTION

The concept of professionalism has always been there during the whole history of medicine in the form of Hippocratic Oath. Professionalism in medicine means set of principles, behaviors, and relationships. 1,2 Doctors are expected to work with probity, honesty, impartiality and accountability. A range of attributes of professionalism in medicine have been recognized including altruism, commitment, excellence, duty, honor & integrity, working in partnership with others and accountability. 4,5

One of the core competency included in western healthcare frameworks, GMC and can MED is professionalism.<sup>6</sup> Although professionalism is an integral competency in medicine, facts propose that the subject of professionalism is neither instruct nor

assessed during undergraduate and residency training in many countries including Pakistan. Pakistan Medical and Dental Council (PMDC) has also included professionalism as one of the competencies to be evaluated in postgraduate residents but still guidelines are unclear. The College of Physicians and Surgeons of Pakistan (CPSP) has also started qualifications in ethics and communication skills through a short course for membership and fellowship students but all attributes of professionalism as defined by the ACGME are yet to be addressed in CPSP courses.

Coaching learning methods, evaluation and the training program for professionalism require to be precise in the undergraduate and postgraduate curriculum. There is a need to review professionalism training during medical residency as well as need for proper development and execution of professionalism curriculum, selection of students with suitable attributes, organize hidden curriculum, with effective role models, high-quality learning and functioning

Competing interests: The authors declared no competing interests exist. Citation: Nasim A, Ashar A. Conceptualization and development of professionalism among general surgical residents. J Fatima Jinnah Med Univ. 2019; 13(2):76-82.

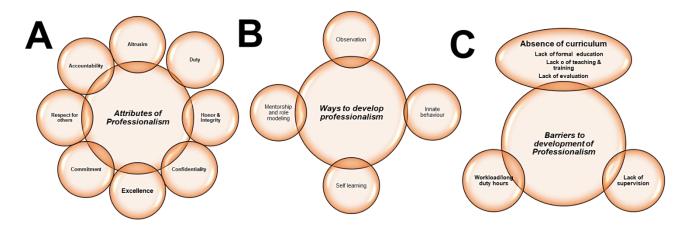


Figure 1). A) Attributes of professionalism; B) Ways to develop professionalism and C) Barriers to development of professionalism

environments to promote professionalism among students. <sup>10,11</sup> Keeping this objective in view, current study was conducted to discover about the concept, development of professionalism attributes as well as identifying barriers in development of professionalism in surgical residents of a tertiary care hospital, in Pakistan.

# PARTICIPANTS AND METHODS

This phenomenological qualitative study in Constructivist paradigm was conducted from June 2017 to July 2018, in Department of surgery, Jinnah Hospital, Lahore which is associated with Allama Iqbal Medical College (AIMC). Department, includes four surgical units that are involved in teaching of undergraduate students and provides Fellowship (FCPS) training to post graduate residents in addition to routine General Surgical Patient care.

Purposeful homogenous sampling technique was used to include Final year (4<sup>th</sup> year) General Surgery residents as research participants and sample size was based on data saturation. To conduct this study approval was obtained from the ethical review board of AIMC. Fifteen interviews were conducted after obtaining an informed consent. Participants were provided opportunity to give their view on how they have developed professionalism, permitted time to offer any explanation and prompt by the investigator was given when desired. Follow up questions by investigator were used to explain the views and the concepts in depth as needed.

The investigator conducted all the interviews while a helper recorded the proceedings and kept written notes. Interviews were tape recorded and

subsequent transcription was done by the investigator into coherent English statements. All transcribed interview notes were then returned to the interviewees for participant feedback. The interviews were read by the investigator several times. Qualitative thematic analysis was done through data reduction followed by data display in matrices by identifying themes and trends and calculation of their frequencies. Words consisting of answers to research questions with similar inferences were grouped under one theme with minimum overlap. Themes and codes (sub-themes) were then redefined through member checking among the researcher and were finalized by passing through following phases of familiarization with data, generating initial codes, searching for themes among codes, reviewing themes, defining and naming themes, and drawing conclusions using this iterative scheme.

Several measures had been taken to establish validity of this qualitative research. A participatory approach with member checking was used for interpretive validity and all the interviewees confirmed the correctness of interviews by going through the transcripts. The comments verbatim with thick descriptions, shown under each of the themes, further confirm descriptive validity. Finally, conclusions were drawn by adopting a constant iterative process by revisiting research questions, transcriptions and matrices by a set of researchers (member checking) by putting each other's interpretations to the test of plausibility, sturdiness and conformability.

# **RESULTS**

There were 15 key informant interviews selected from all four surgical units of Jinnah Hospital, Lahore. The

78 Nasim and Ashar

Table 1. Frequencies of themes and trends

Trends	Frequency
Knowledge of professionalism	
Accountability	30
Excellence	27
Confidentiality, honor and integrity	15
Duty	14
Altruism	13
Respect for others	12
Professionalism development	
Self-learning	55
Observation	52
Innate behavior and family training	33
Mentorship and role modeling	18
Barriers of development of professionalism	
Lack of supervision and monitoring	95
Lack of formal education	18
Lack of teaching and training	35
Lack of evaluation	15
Lack of supervision and monitoring	32
Workload and long duty hours	30

interviewee's response was used to generate concepts reported by the participants as reflecting the 'attributes of professionalism, Ways to develop professionalism and barriers to development of professionalism shown in Table1 with the word frequency. All the diverse responses were then coded into three broad themes under the main theme "Medical Professionalism":

- Knowledge of professionalism comprising of altruism, duty, confidentiality, honor & integrity, respect for others, excellence, commitment and accountability (Figure 1A).
- Ways to develop professionalism including observation, mentoring and role modeling, selfdevelopment and innate behavior (Figure 1B).
- Barriers in development of professionalism including deficiency of formal education, deficiency of teaching and training, deficiency of supervision and monitoring, deficiency of evaluation and workload and long duty hours (Figure 1C).

Below are the examples of responses that were categorized into each of these themes to further explain and simplify the themes.

Theme 1: Knowledge of Professionalism
The first theme identified in this study was knowledge of professionalism (Figure 1A).

1. Accountability: It is mandatory at every level—patients, public, and profession. Doctors are answer able to their patients as well as to society for addressing their health related requirements. Below are few responses representing this attribute of professionalism.

"Daily or time to time, I talk to myself that I have to satisfy my self-conscience, I have to be held accountable whether here or in life hereafter for my dealings with the patients."

"If you are not accountable by your seniors and by your organization you will not follow the fundamentals of professionalism."

- 2. Excellence: Commitment to excellence is an important attribute in medical professionalism. This concept was expressed by the participants as shown by the response below.
- "I am trying to maintain my own standards I analyze my behavior and try to improve it if there is any need to".
- "I do try my level best to be at my best behavior, to be considerate amongst my colleagues, to be considerate towards the patient."
- 3. Confidentiality, honor & integrity: The interviewee also responded that attributes of professionalism should include confidentiality honor & integrity. Examples are given here:
- "We try our best to maintain confidentiality with the patient."
- "I am trying to fulfill these attributes by being humble and respectful towards my patients. I try my best to attend every patient with same honor and integrity and without any differentiation. In this regard, I take motivation from supervisors and senior colleagues, as I believe that my professional behavior is polished in this way."
- "My behavior towards the patient, punctuality, my dedication to the patient and duties assign to me which are fulfilled with full dedication."
- 4. Duty: Duty means 'commitment to service "as evident from this response:
- "I am trying to practice these attributes by being punctual, honest to my job, providing justice, showing empathy to my patients or the public I deal. I am trying to give them better health and awareness of public health for their healthy life."

"It's my duty to be caring and responsible towards my patients."

5. Altruism: One of the concepts reported was "Altruism" which means unselfishness, regards for patients and putting patient's interest on the top. Altruism is the essence of professionalism. It was also indicated that professionalism should include a worry or empathy for the patient. This was uttered in terms of patient rights, empathy, being polite and kind to the

patient in the particular area of specialty and fairness towards patients. Examples are given here:

"I am practicing different attributes of professionalism in my training in a way that I always give priority to patient care during my ward duties and during their treatment and I have always kept patient's interest on the top."

"I am trying to do it and I try my best to put my interest below the patients' interest and I try to deal with them very polity"

6. Respect for others: Another main attribute identified was respect. All of the respondents emphasized the value of respect for relationships between patients and doctors as well as respect amongst colleagues. Below are the examples:

"To me, the professionalism is serving the patient with full respect, dedication, devotion and with maximum capabilities"

"I respect and try to be respectful to my patient's cultural and religious beliefs"

Theme 2: Professionalism Development
The second theme identified in our data was "ways to
the develop professionalism" (Figure 1B) which
included following main concepts.

1. Self-Learning: A way to develop professionalism in surgical resident was "self-learning" as evident by following verbatim:

"It's a self-learned behavior it's something that nobody taught us"

2. Observation: The most commonly reported way to develop professionalism in surgical residents was by direct observation of seniors and mentors. Example responses are as follows:

"I have learned these attributes only by observing my seniors and my colleagues and my parents as well"

"We learn everything from people around us specially people who are senior to us like our teachers, different heads of departments."

3. Innate behavior and family training: Learning professionalism through family and friends was also noted in our data.

"The attributes I have developed it was just grooming at home"

"We have been taught since childhood about our behavior"

4. Mentorships and role modeling: Another concept noted under this subtheme was "mentorship" which was reported by the respondents as follows:

"I have developed all these attributes in this unit preferably by first from my mentor and then other seniors"

"There are the things that you learn from your supervisors, from your colleagues and from your seniors" For "role modeling", example responses were:

"I developed these attributes in my profession; I made some role model, like in hard working I use to see some my seniors working in emergency"

"I made my professor as a role model and I follow him"

Theme 3: Barriers to Development of Professionalism

The third theme identified in our data was "barriers to the development of professionalism" which included following main concepts (Figure 1C).

1. Absence of Professionalism Curriculum: (i). Lack of formal Education: A common barrier which was pointed out by almost all participants was lack of formal education for professionalism and each respondent emphasized the inculcation of proper curriculum during their undergraduate and post graduate training. Example responses are as follows:

"I would suggest that the students who are coming in a medical profession, they should be given appropriate knowledge about this professional attitude because we lack in this field very much".

"The knowledge of the professionalism and its different attributes should be included in the subjects of under-graduate as well in the postgraduate levels."

"These attributes should not only be taught during the fellowship training but also be made compulsory to be practiced by all of our colleagues."

(ii). Lack of formal teaching and training: It was noted in our data that there is no formal teaching and training regarding medical professionalism and most of the attributes learnt by the respondents were either through self- learning, role modeling and personal grooming. Moreover, there is lack of support system in our medical schools and hospitals which makes it even more difficult to develop and practice professionalism.

"There is no system to protect you and if you have to protect your own skin then the professionalism deteriorates". 80 Nasim and Ashar

"What attributes I have developed it was just personal grooming only, there is no formal on job training, we just learn by observing our seniors."

(iii). Lack of evaluation: There is currently no formal evaluation, feedback and formal assessment mechanism for development of attributes of professionalism which is evident by the following statements.

"There should be proper classes in every ward, and I think it should be evaluated monthly or three monthly basis".

"Every-body should have a proper feedback here how is he behaving in wards, with his patients, colleagues and the seniors. One should know his short comings and if someone is lacking in some where he should be taught about this".

"It should be assessed with consent or without consent and also assessed indirectly."

2. Lack of supervision and monitoring: It was noted in our data that respondents pointed the lack of supervision and need for monitoring and identified it as a barrier to the development of professionalism.

"Doctors should be regularly observed and monitored by their respected supervisor and keen silent observation should be made and feedback should be given about their behavior."

"There should be a monitoring, feedback mechanism, our behavior should be checked by our colleagues, our staff and there should be monthly reports."

"Although there are nominated supervisors but there is lack of formal structured supervision"

3. Workload and long duty hours: There was a lot of workload pressure while working in emergency as compared to wards which was identified as a barrier to the development of professionalism in surgical residents as evident by the responses below:

"I blame the duty hours basically which is so hectic we didn't get time to apply all those attributes."

"As a surgeon I was overburdened with duty hours, so my professionalism deteriorated".

"The routine is so hectic, and I didn't get time for break sometimes especially when we are doing surgical emergency duties".

# **DISCUSSION**

The post graduate residents working in the tertiary care hospital reflected as having unclear theoretical understanding regarding medical professionalism as we had to provide related resources to all of them to prepare for interview. Although they demonstrated

positive attitude in practicing medical professionalism attributes. Same was the finding in another study that there is very little information about the knowledge on professionalism and ethics training among medical students in Malaysia and this study has shown that there are major weaknesses in the training of ethics and professionalism. 12 But a study in Sudan reflects that, the level of professional knowledge of the studied final-year medical students is very good and this combined with excellent attitudes in community protection. 13 Thematic analysis identified altruism, confidentiality, respect, honesty and empathy as core attributes. of medical professionalism which is endorsed by a local study which highlighted the significance of attributes of professionalism.<sup>14</sup> Another similar study showed inadequate information but positive attitude to medical professionalism in junior doctors. It also emphasized on need to revise educational curriculum. 15 A previous effort that had used the American Board of Internal Medicine foundational fundamentals of professionalism for assessing students view has established that all student groups agree upon these fundamentals of professionalism as core attributes. 16,17

The students and post graduate trainees perceived role models as the key factor in their development of professionalism in this study. In another study students recognized the need for affirmative role models in their learning environment. 18 There is evidence in the literature that role modeling and individual reflections, perfectly guided by faculty, are the main successful ways for developing professionalism. 19 Various methods identified to develop professionalism in this study included mentorship and role modeling, observation, self-learning and innate behavior. This is supported by other studies which reflect that the major themes reflecting the development of professionalism in medical students include curriculum plan, student assortment, teaching and learning methods, role modeling and ways of assessment.20 Residents learn these values during their educational years but still certain aspects of professionalism seem to be neglected. It is mandatory to teach and assess professionalism in order to develop professionally responsible future specilists.<sup>21</sup> In one study case based scenarios and role plays were among the most effective method to learn professionalism in addition to other methods found in our study.14

In this study, residents perceived barriers to develop professionalism into their daily practice including workload, long duty hours, as well as lack of cooperation and support from the system. Additionally,

lack of structured training is another barrier. It is also evident in a local study which highlighted that in Pakistan no appropriate activity or course had been designed for enhancing professionalism undergraduate medical curriculum. 14 It has been proved by some other studies that duty hours implementation offers challenges, like limited human and financial resources and opportunities for negotiating the ideology of professionalism.<sup>22-24</sup> The deficiencies could be attributed to deficiencies in the curriculum, faculty expertise, unclear evaluation methodology and absence of feedback besides lack of support system from the organization.25,26

There is evidence that troublesome surgeon attitude in operating room affects the participant's attention, augment mistakes during procedure, avoidance from careers in surgery and less respects for surgeons.<sup>27</sup> A thoughtful consideration of the apparent desires and barriers among doctors is vital in order to develop successful instructive and training programs to fulfill their professional needs and practice.<sup>28</sup> Residency training programs are backbone to the healthcare system as they train future practitioners. Considering the magnitude of medical professionalism, all training accrediting bodies should institutes and appropriate measures to ensure a high level of professionalism their residents. Medical in professionalism should not only be taught but assessed too, to avoid unprofessionalism and its consequences.<sup>29</sup> This will not only help in recognizing the flaws of professionalism training but also aid in devising a plan for prospective training on the issue. This was highlighted by one of the participants as quoted "It should be assessed with consent or without consent".

A well-defined curriculum of professionalism in undergraduate and postgraduate medical education is the need of time. Although curriculum for the formation of a professional medical identity is still at its early stages of development and requires synergy between different perspectives to help develop a desirable professional identity among doctors.<sup>30</sup> It is unanimous recommendation in our study to include professionalism and revise the existing curriculum to address the existing need of professionalism. Various means suggested for developing and measuring professionalism in our study included inculcation of professionalism in medical curriculum and residency training, direct faculty observation and feedbacks from patients, nurses and peers along with senior faculty presenting as strong Role Models. Same is the recommendation in another study that medical teachers should focus on being role models for their students as students consider them to be a means for learning the qualities of professionalism.<sup>31</sup>

It should be a mandatory competency for completion of residency as well as the CPSP fellowship but it is evident that junior doctors are unaware how it should be taught and formally assessed.<sup>32,33</sup> Although this has been already been included as part of training programs but this research highlights lack of implementation.

The cooperation and collaboration of government, medical organizations, doctors and proper support system are needed to implement these in our health care system. Only by proper teaching and evaluation of professional attributes along with provision of a good working environment, one can prepare the medical practitioners that fulfill the needs of the society.

This study evaluated the knowledge of surgical residents only about the development of various attributes of professionalism and does not reflect the view of other specialties. The study was conducted in a public sector teaching hospital only and transferability to other workplaces/ institutions have to take into consideration this research's setting.

# CONCLUSION

Weak professionalism in medicine has been identified as a basis of medical misconduct and morbidity and mortality in patients. Implementing curriculum pertaining to medical professionalism in current medical education system and continuous training during residency programs is a necessity not a luxury. This study reveals the understanding and perception on development of medical professionalism and identifies the perceived barriers in development of professionalism in our cultural settings.

This concludes that not only teaching internationally recognized components of professionalism at undergraduate and post graduate level is crucial to overcome gap, but also continuous performance assessment is of paramount importance. There is a need to come up with an optimum method and strategies to advance professionalism in future doctors of Pakistan.

# REFERENCES

- 1. Gondal K, Khan J, Ahmed A. Measuring professionalism in residency program. Biomedica. 2015;31(3):239-45.
- Working Party of the Royal College of Physicians. Doctors in society. Medical professionalism in a changing world. Clin Med (Lond). 2005;5(6 Suppl 1):S5-40.
- Lauer AK, Lauer DA. The good doctor: more than medical knowledge & surgical skill. Ann Eye Sci. 2017; 2: 36.

82 Nasim and Ashar

 Altirkawi K. Teaching professionalism in medicine: what, why and how? Sudan J Paediatr. 2014;14(1):31-8.

- Finn G, Garner J, Sawdon M. 'You're judged all the time! 'Students' views on professionalism: a multicentre study. Med Educ. 2010;44(8):814-25.
- Frank JR. The CanMEDS 2005 physician competency framework: Better standards, Better physicians, Better care. Ottawa: The Royal College of Physicians and Surgeons of Canada. 2005. Retrieved from http://www.scirp.org/(S(czeh2tfqyw2orz553k1w0r45))/reference/ReferencesPapers.aspx?ReferenceID=1957181.
- Minai FN. Professionalism in residency training. J Coll Physicians Surg Pak. 2009;19(11):675-7.
- ABIM Foundation. American Board of Internal Medicine; ACP-ASIM Foundation. American College of Physicians-American Society of Internal Medicine; European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. Ann Intern Med. 2002;136(3): 243-6.
- Modi JN, Anshu, Gupta P, Singh T. Teaching and assessing professionalism in the Indian context. Indian Pediatr. 2014; 51(11):881-8.
- Sobani ZU, Mohyuddin MM, Saeed SA, Farooq F, Qaiser KN, Gani F, et al. Professionalism in medical students at a private medical college in Karachi, Pakistan. J Pak Med Assoc. 2013;63(7):935-9.
- Ashar A, Ahmad A. Developing professionalism: dental students' perspective. J Coll Physicians Surg Pak. 2014;24(12):902-7.
- Yadav H, Jegasothy R, Ramakrishnappa S, Mohanraj J, Senan P. Unethical behavior and professionalism among medical students in a private medical university in Malaysia. BMC Med Educ. 2019 18;19(1):218.
- Husain NE, Elsheikh NM, Elsheikh MN, Mahmoud A, Sukkar MY, Ibnouf MA, et al. Final year medical students and professionalism: lessons from six Sudanese medical schools? J Public Health Emerg. 2018;2(27):1-7.
- Akhund S, Shaikh ZA, Ali SA. Attitudes of Pakistani and Pakistani heritage medical students regarding professionalism at a medical college in Karachi, Pakistan. BMC Res Notes. 2014 15;7:150.
- Peters D, Ramsewak SS, Youssef FF. Knowledge of and attitudes toward medical professionalism among students and junior doctors in Trinidad and Tobago. West Indian Med J. 2015;64(2):138-44..
- DeLisa JA, Foye PM, Jain SS, Kirshblum S, Christodoulou C. Measuring professionalism in a physiatry residency training program. Am J Phys Med Rehabil. 2001;80(3):225-9.
- Duke LJ, Kennedy WK, Mc Duffie CH, Miller MS, Sheffield MC, Chilshom MA. Student attitudes, values and beliefs regarding professionalism. Am J Pharm Educ. 2005;69(5):104.

- Byszewski A, Hendelman W, McGuinty C, Moineau G. Wanted: role models-medical students' perceptions of professionalism. BMC Med Educ. 2012;(15)12:115.
- Birden H, Glass N, Wilson I, Harrison M, Usherwood T, Nass D. Defining professionalism in medical education: a systematic review. Med Teach. 2014;36(1):47-61.
- Passi V, Doug M, Peile Ed, Thistlethwaite J, Johnson N. Developing medical professionalism in future doctors: a systematic review. Int J Med Educ. 2010;1:19-29.
- Woloschuk W, Harasym PH, Temple W. Attitude change during medical school: a cohort study. Med Educ. 2004; 38(5):522-34.
- Siddiqui ZS. Continuous professional development (CPD) in Pakistan: ready to take off. Isra Medical Journal. 2009;1(3):64-8
- Cohen-Gadol AA, Piepgras DG, Krishnamurthy S, Fessler RD. Resident duty hours reform: results of a national survey of the program directors and residents in neurosurgery training programs. Neurosurgery. 2005;56(2):398-403.
- 24. Accreditation Council for Graduate Medical Education. Resident duty hours and the working environment. Common program requirements, Section IV D Chicago: ACGME. 2003.
- 25. Lang CW, Smith PJ, Ross LF. Ethics and professionalism in the pediatric curriculum: a survey of pediatric program directors. Pediatrics. 2009;124(4):1143-51.
- Adkoli BV, Al-Umran KU, Al-Sheikh M, Deepak KK, Al-Rubaish AM. Medical students' perception of professionalism: a qualitative study from Saudi Arabia. Med Teach. 2011;33(10):840-5.
- 27. Cochran A, Elder WB. Effects of disruptive surgeon behavior in the operating room. Am J Surg. 2015;209(1):65-70.
- Ikenwilo D, Skatun D. Perceived need and barriers to continuing professional development among doctors. Health Policy. 2014; 117(2): 195-202.
- Cruess RL, Cruess SR. Teaching professionalism: general principles. Med Teach. 2006,28:205-8.
- Forouzadeh M, Kiani M, Bazmi S. Professionalism and its role in the formation of medical professional identity. Med J Islam Repub Iran. 2018;32(130):1-4.
- Kebede S, Gebremeskel B, Yekoye A, Menlkalew Z, Asrat M, Medhanyie AA. Medical professionalism: perspectives of medical students and residents at Ayder Comprehensive and Specialized Hospital, Mekelle, Ethiopia – a cross-sectional study. Adv Med Educ Pract. 2018; 9: 611-6.
- Salam A, Haque M, Helali AM, Islam M, Mohsena M, Rahman Z, et al. Comparative study on professionalism of forthcoming medical doctors between two private medical colleges in Savar, Bangladesh. Int J Pharm Pharm Sci. 2013; 5(3): 659-65.
- Stockley AJ, Forbes K. Medical professionalism in the formal curriculum: 5th year medicalstudents' experiences. BMC Med Educ. 2014;(30)14:259.