academicJournals

Vol. 12(7), pp. 380-386, 10 April, 2017 DOI: 10.5897/ERR2017.3132 Article Number: 8A03B1B63534 ISSN 1990-3839 Copyright © 2017 Author(s) retain the copyright of this article http://www.academicjournals.org/ERR

Educational Research and Reviews

Full Length Research Paper

Definition of professionalism by different groups of health care students

George Zafiropoulos

University of South Wales, United Kingdom.

Accepted 4 January, 2017; Accepted 14 March, 2017

Professionalism is important in all service-providing professions. Professional bodies have extensive rules and regulations creating the foundations of the definition of professionalism, its meaning and these rules have to be followed. In view of this, healthcare students are given intensive training. A prospective study conducted in a District General Hospital, to establish if professionalism was clearly defined. A questionnaire with open questions was given to 75 students from different disciplines including medical, nursing and chiropractic students (25 individuals from each group). The participants were at the end of their studies. The General Medical Council (GMC) criteria for professionalism were used. They were discussed as part of their induction to the orthopaedic department and the questionnaire was given to them at the end of their placement. Their answers were grouped, categorised and the findings were then analysed. All groups demonstrated a good understanding of the definition and factors that influence professionalism. Student nurses performed overall better than the other two groups. Medical and chiropractic students scored lower on communication, working with colleagues and audit/research. All three groups scored low in the categories of problem dealing and health. Reflection and mentoring were two of the subjects that they considered as important to help them improve their cognition to become a professional subject. The inclusion of the professionalism as subject to education seems that helps the understanding of the term but contact with the clinical environment and proper mentoring by senior clinicians enhances to the understanding in some of the criteria. GMC criteria can be used for the assessment of cognition of professionalism but with the addition of reflection in the list.

Key words: Professionalism, healthcare, education.

INTRODUCTION

Many educators and professional bodies have been studying the behaviour and attitude of their students or their members extensively in the past towards their customers and their other colleagues. All professional associations constantly regulate all properties which constitute professionalism. The most professions regulated are those which have as direct objective the human needs and they are those with the subject of

E-mail: georgezafi@aol.com. Tel: 00447968093557.

Authors agree that this article remain permanently open access under the terms of the <u>Creative Commons Attribution</u> <u>License 4.0 International License</u>

Medicine, Law, Ministry and Education (De Rosa, 2006). In healthcare, professionalism is gaining an increasing attention (Swick, 2000; De Rosa, 2006; Talbott and Mallott, 2006). Doctors' regulatory body, in their guidance, emphasises that all individuals need to be very attentive towards their behaviour to their patients and the members of patient's families, as well as other health professionals and colleagues. Professionalism is one of the fundamental criteria of every doctor's appraisal and revalidation (American Board of Internal Medicine (ABIM), 2001; Irvine, 2005; General Medical Council (GMC), 2009; Scottish Government, 2012; Health Care and Professions Council (HCPC), 2014).

Professionalism reflects the professional competence of a physician and not only the individual's behaviour (Swing, 2007). Professional competence is more than a demonstration of individual skills and has to be examined as a whole. A competent clinician is able to think, feel and act. like a proper physician (Gale and Marsden. 1982, Eraut, 2000). Professional competence includes communication, knowledge, technical skills and clinical reasoning. It is more than knowledge including as well the individual's ability of solving problems providing clear and definitive solutions. It can be defined as the ability someone has to manage problems, make decisions having limited information and tolerate uncertainty. A person has to be knowledgeable and in the same time to have the correct attitude, to behave ethically, to be altruistic, believe and apply the profession's codes, to have integrity and honesty, respect others and self, to be self-regulated and maintain a high degree of competence (Schon, 1983; Swick, 2000; Wear et al., 2000). It is measured by reviewing the individuals' cognition, technical skills, scientific, clinical and humanistic judgement as well as use of time, team work, teaching, respect, learning, handling conflicts and willingness to recognise and correct possible errors (Epstein and Hundert, 2002). Professionalism can be described as "the practice of doing the right thing, not because of how one feels, but regardless of how one feels" (De Rosa, 2006).

Professionalism in healthcare must be the natural base of a clinician's work. Society expects health professionals to have and demonstrate a professional manner in their conduct with those who serve and to each other. All health workers have to understand in depth the meaning of the word "professionalism", and how the lack of it will lead to negative consequences in their career and professional life. Misbehaviour which clearly affects their responsibilities and safety towards the public and their colleagues, leaves medicine tarnished (Swick, 2000; ABIM, 2001; GMC, 2009). Professionalism is part of the educational curriculum in undergraduate level, in most institutions.

The purpose of this study is to find out how different groups of students from different disciplines, different backgrounds, training, experiences, institutions and regulatory bodies, who were given further information on

the GMC criteria and regulations at their induction course to the department, define professionalism and find if further education and training would be necessary, so individuals to become aware of the profession's and mainly the community's needs.

METHODOLOGY

This is a randomised study performed in a District General Hospital. This institution was involved in education and clinical teaching of different disciplines of students. Three different groups of students (Medical, Nursing and Chiropractic) with similarly selected matched groups were included. All participants were at the end year of their undergraduate training and they took part in the study freely. Each group consisted of 25 students. All had received training previously on professionalism through their institute and at induction to the department; they were introduced to the criteria that GMC is used to define professionalism. No hand-outs of the introductory sessions were given to any of the students. At the end of their placement. they were asked if they are willing to take part in the study. Verbal consent was obtained from all participants who participated after an information sheet was given, explaining the aims, objectives and the rational, was given and read to them (Table 1). Ethical committee approval was obtained (University of South Wales).

The questionnaire was given to them with five questions (one with limited demographic details and four open questions) to be completed (Table 2). The questionnaire was a product of discussion of a small group of senior clinicians who gave their opinion and agreed on the questions. The questionnaire was tried in a previous study and was verified as valid (Zafiropoulos, 2016). To analyse, group and quantify the answers, the criteria of the GMC's publication were considered as relevant and used (GMC, 2009).

From the first question, the demographics, grade, position and discipline of every participant was established. Participants were divided into their separate groups for healthcare (Medical, Nursing and Chiropractic) according to their discipline.

All replies were grouped and analysed by using the GMC's twelve criteria points that characterise professionalism. The frequency of the answers presented in each group quantified and the total percentage was calculated.

Further grouping analysis and quantification was performed for the answers of the last question asking for the factors which can assist the improvement of professionalism in healthcare. The frequency was calculated.

RESULTS

All 75 participants replied in the questionnaire. The opinions of all participants, from questions 2 and 3, were grouped and analysed using the GMC criteria (GMC, 2009) as basis, for the definition of professionalism (Table 3).

It was found that student nurses had a better overall understanding of professionalism scoring more points than the other two student groups. The points where medical and chiropractic students scored lower were those of communication (80% compliance both groups), working with colleagues/teamwork (Medical Students 92% and Chiropractors 80%) and audit/research (Medical Students 88% and Chiropractors 80%). All three groups scored low in problem dealing (Medical Students 92%,

Table 1. Given and read information.

Information for the project

Thank you for taking the time to participate in this study.

The purpose of the study is to establish the degree of your understanding on the definition of "Professionalism" and how this affects the health care practitioner.

Do all health professionals, despite their training and their regulatory bodies; have the same or a similar opinion about the meaning of Professionalism?

Furthermore, the aim of the study is to establish if there is a need of further education for health professionals or the community which they are serving.

Your complete honesty is valued. The whole data is and will remain anonymously collected and will remain confidential. It will only be used for the purpose of the study.

By agreeing to this information you give your consent to receive a questionnaire and take part in the study.

You understand that you can withdraw from the research at any time without giving a reason.

Table 2. Questionnaire.

Professionalism

Please answer the following questions:

1. Are you a? (Please circle accordingly):

- 2. What is professionalism?
- 3. What behaviours must healthcare professionals have?
- 4. How can we improve professionalism in healthcare?

If you wish to offer additional information, please do so below:

Student Nurses 96% and Chiropractors 96%) and health (Medical Students 80%, Student Nurses 96% and Chiropractors 92%).

Following this, the answers of question 4 were grouped and analysed (Tables 4 and 5). Table 4 provides an analytical view of what the participants thought that is important to do to emphasis and keep for the continuity of improvement. It is evident that student nurses have the highest score in all the categories. The medical students gave the lower amount of answers scoring of all groups. In Table 5, the sum of all groups' opinions given is tabulated indicating the different criteria which they think are necessary to improve the understanding of professionalism within all healthcare professionals. It is evident that the criteria of patient relationship/good standards in practice/teaching scored high (100% to 98.6%) but dealing with problems seems that slipped out of their mind (achieving just 35%), and teamwork or

communication were not better off (having 77.3 and 82.6% each). Audit and evaluation of practice scored 86.6 and 84%, respectively. Other criteria as health scored nothing as nobody mentioned it.

Finally, at the last open question of the questionnaire, asking for any additional information, student nurses mentioned that reflection could be one of the criteria to characterise professionalism. From the 25 students of this group, 12 individuals (48%) mentioned reflection as a way to improve understanding of professionalism. From the other two groups, 6 medical (24%) and 5 chiropractor (20%) students said that mentoring will improve their understanding on professionalism.

DISCUSSION

A profession in general is more than a job. For the

Table 3. Grouped answers from Questions 2 and 3 (GMC criteria); All participants (n 75).

GMC criteria	Medical students (n 25)	%	Student Nurses (n 25)	%	Chiropractor students (25)	%	Total	%
Relationship with patients	25	100	25	100	25	100	75	100
Providing good standard of practice	25	100	25	100	25	100	75	100
Maintaining good medical practice	25	100	25	100	25	100	75	100
Maintaining the standard of performance/evaluate practice	23	92	25	100	24	96	72	96
Teaching/Training/Assessment	25	100	25	100	24	96	74	98.6
Confidentiality	25	100	25	100	25	100	75	100
Trust	23	92	25	100	23	92	71	94.6
Communication	20	80	25	100	20	80	65	86.6
Dealing with problems	23	92	24	96	24	96	71	94.6
Working with colleagues (Teamwork/Leadership/Respect/Sharing information	23	92	25	100	20	80	68	90.6
Audit/Research/Reporting/Honesty/Ethics	22	88	25	100	20	80	67	89.3
Health	20	80	24	96	23	92	67	89.3
Total number of the points mentioned in the answers	279	-	298	-	278	-	855	-

Table 4. Grouped answers extracted from questions 4 (GMC criteria); All participants (n 75).

GMC criteria	Medical students (n 25)	%	Student Nurses (n 25)	%	Chiropractor students (25)	%
Relationship with patients	25	100	25	100	25	100
Providing good standard of practice	25	100	25	100	25	100
Teaching/Training/Assessment	25	100	25	100	24	96
Audit /Research/Reporting/Honesty/Ethics	20	80	25	100	20	80
Maintaining the standard of performance/evaluate practice	18	72	25	100	20	80
Communication	18	72	25	100	19	76
Working with colleagues (Teamwork/Leadership/Respect/Sharing information)	18	72	25	100	15	60
Dealing with problems	3	12	24	96	7	28
Total answers	152	-	175	-	156	-

Table 5. Sum of the ways need to improve professionalism (Grouped answers of all students).

Factors to improve professionalism (n 75)	Answers	Percentage	
Relationship with patients	75	100	
Providing good standard of practice	75	100	
Teaching/Training/Assessment	74	98.6	
Audit /Research/Reporting/Honesty/Ethics	65	86.6	
Maintaining performance/evaluate practice	63	84	
Communication	62	82.6	
Teamwork/Leadership/Respect/Sharing information	58	77.3	
Dealing with problems	35	46.6	

service-providing professions is the activity and commitment of someone to serve others without forgetting the need to serve one's self. A professional has

to be dedicated to the chosen profession. All health professionals are bound by their oath to serve their patients ethically. A doctor for example, takes the

Hippocratic Oath. Health workers bind to the commitment to use their abilities, knowledge and skills for the service and treatment of all confronted illnesses a patient has. To do this, they have to demonstrate moral and ethical excellence. They have to inspire trust, honesty and compassion to others and must have the courage to confront all difficulties that may arise. To learn all this, they have to have cognition or pre-cognition of these properties. They must also train themselves during their professional journey. They have to be disciplined and belief in self-improvement. It is very common to have a mentor and try to follow this mentor's steps and learn the ethics of the profession. Continuous learning is paramount for anybody's continuous progress and improvement (De Rosa, 2006). In those cases that human and cognitive weakness may surface, the mentor's support and advice has to be taken. Mentor's knowledge is useful, as some of the ways that are necessary for further development is hidden and it has to be identified, bringing it up on the surface and in real life (Hafferty and Franks, 1994).

Professionalism is under increased scrutiny across all professions. These professions that have as their subject the direct service towards other persons, like health, law, ministry or teaching are those that are more affected (De Rosa, 2006; HCPC, 2014). Professionalism, though, is not clearly and well defined. A lot of scholars and organisations place their criteria and regulations of what the word means and what characteristics a professional should have. Some of these criteria are common among the published work, but other criteria are not well defined (ABIM, 2001; Swing, 2007; HCPC, 2014; GMC, 2009, 2015). The definition which is coded by all these different organisations though is not the real problem. The problem arises on the way each single individual understands, interprets or even practices this given information the institutions provide. There are factors that may threaten professionalism. Stress, lack of confidence, fatigue, overwork, lack of experience, conflicts or tensions between professionals or arrogant superiors are some of them. Due to this, a healthcare worker has to be supported with more training, obedience to policies, reflection and mentoring (Gale and Marsden, 1988; ABIM, 2001; Epstein and Hundert, 2002).

There is a consensus among scholars and organisations that training for the definition of professionalism has to start early in a health worker's life. A lot of educational institutions have undergraduate curricula in which professionalism is taught. The definition codes are well explained; as they are well controlled and assessed within the educational programmes and courses. It is found though that it is necessary that a person has to have a constant stimulation of their personal cognitive knowledge. This will help this person's thinking and performance according to the rules. The educators have to be aware of their students' different backgrounds and "adjust" their behaviour (Haffery and

Franks, 1994; Eraut, 2000). Professionalism is a combination of values, behaviour and relationships (Engel et al., 2009). The professional competence is part of professionalism (Eraut, 2000; Swick, 2000; Redfern et al., 2002; Scottish Government, 2012). As professionalism is considered an important part of a health worker's contract with society, every individual has to continue improving by constant personal development training and continuing exposure of themselves to different experiences (Kirk, 2007). There are voices calling that the selection of health workers or health workers to be, has to start even on the admission process to the institutions (Passi et al., 2010; Waheet et al., 2011; Scotish Government, 2012). Professionalism of the individuals who are involved in health care is necessary to be assessed by using a multitude of methods (Salvatori, 1996; Redfern et al., 2002).

The fear of all educational institutions is the unprofessional behaviour of students, which if present. may lead to negative behaviour at their future professional life. This behaviour may lead to the erosion of the professionalism health care workers have to provide. People from different backgrounds may influence this. Students on the other hand are welcoming the diversity of different backgrounds of either their learners or educators. What they demand though is the need to follow ethical professional rules at all time. They have blamed the unprofessional behaviour of their educators and the influence of such actions made upon them. These educators were meant to be their mentors. Such appealing behaviour from the seniors can have a devastating effect on the juniors and can lead to confusion and bad habits (Swick et al., 1999; Roberts et al., 2004; Brainard and Brislen, 2007). It has been suggested that students with unprofessional behaviour need to undergo mental health evaluation (Bennett et al., 2001). Students may demonstrate unprofessional behaviour if their teaching is insufficient and becomes impossible to them to fully understand the subject. Due to the growing interest and emphasis on professionalism, there is the suggestion that psychiatrists need to be involved directly in the education of these matters, such as definition of professionalism (Talbott and Mallott, 2006). On the counts to tackle unprofessional behaviour, the implementation of measures such as reflection, selfassessment and role model are thought to be more helpful in encouraging professional development, but it would be necessary to "ring-fence" the time allocated to the learners and release the pressure from the educators (Swick, 2000; Reed et al., 2008; Engel et al., 2009).

In the present study, students of three groups representing different disciplines of health professionals, with different training and institutions, trying to throw light on the understanding that they have on professionalism. All of them were at the end of their training. This made them direct future professionals and they were considered able to recognise the properties constituting

professionalism (De Rosa, 2006). The GMC criteria of characteristics defining professionalism were used (GMC, 2009). These criteria were chosen as more descriptive and concise than those used of the other professional bodies and their theme is not different from professional criteria or properties mentioned by other authors (De Rosa, 2006; Kirk, 2007). In a previous contacted study, it emerged that the criteria mentioned by GMC were one of the limitations, as they were not taught in detail to the different professionals and possibly were not understood or followed with the same degree by them (Zafiropoulos, 2016). Because of this reason, a detailed discussion is given on those who took place during the students' induction in the department. All criteria were presented in detail to all, educating them on the matter.

From the findings, it emerged that student nurses scored higher than the other two groups, despite that they were introduced to these criteria for the first time during their initial day in the department. The group of the Chiropractor Students, despite that they also were introduced to the criteria during their induction day for the first time, came almost level with the group of the medical students who had participated in instruction tutorials on the GMC regulations and criteria of professionalism through their institution.

This is an indication of the "open mind" that these two groups shown during their induction and their willingness to fully understand the "rules" of another professional body, although it is known that they apply similar criteria themselves (Salvatori, 1996; Redfern et al., 2002; Scottish Government, 2012). It is noticeable that their effort to adapt their behaviour accordingly (Engel et al., 2009).

Student nurses mentioned, more than any of the others, that working in teams and clear communication improves the quality of the service they provide to their patients. Chiropractor students score the same as medical students on communication, but lower than the others two groups on teamwork. This is possibly due to the way they practice at a later stage during their professional lives. It is common for Chiropractors to work as sole practitioners on the private sector. Despite this 20 subjects of the chiropractic students (80%), define themselves as part of a team indicating that education and mentoring can stimulate and alter their cognitive understanding and place them as part of the wide health care group.

In Audit and Research Student Nurses again scored higher. This may be linked with their practice of reflection which they perform during their training. This probably drove them to mention this as addition to the criteria. During their reflection they are used to discuss cases in detail, promoting research and auditing, something that possibly is not an extensive practice at the other two disciplines.

The practice of reflection may be the reason that student nurses answered higher, in comparison with the

other two groups, mentioning that dealing with problems will improve professionalism in healthcare. Reflection is a key element for the improvement of professional behaviour (Gale and Marsden, 1988; Epstein and Hundert, 2002; Engel et al., 2009).

It is interesting to note that health scored low in all three groups as one of the criteria influencing professionalism. Nurses scored slightly higher than the other two groups, although the numbers do not show so much of a difference. Despite this, nobody from any of the groups included health as one of the criteria which can improve professional behaviour. This could be due to the reason that younger people in general are known not to consider health decay as important. They perceive themselves as being strong and will live a lengthy healthy life. This indicates the need to understand that health is part of one's personal development (Kirk, 2007).

Differences on the training between these three groups may be the reason of the way that they responded. Student nurses as well as chiropractic students are participating in the clinical environment at an earlier stage than the medical students. Medical students are subjected to early active clinical participation and the delay of mentoring by the senior clinician in a "true" professional environment may be the reason of lower scoring in some criteria by this group in comparison with the former mentioned groups. So emphasis on this part may strengthen the position of the medical students. Well versed tutors can influence this in a positive way (Roberts et al., 2004; Reed et al., 2008). Mentoring is stressed by some individuals of medical student group as well as by the chiropractors as one of the criteria which will strengthen their professional understanding. This is following the lines of other researchers (De Rosa, 2006).

The criteria used were based on GMC regulations and despite the possibility of other people apart from doctors were not fully aware of the different characteristics; it was found that made no difference when all groups were educated on those. They include properties of professionalism analysed and mentioned by other scholars (Gale and Marsden, 1988; Epstein and Hundert, 2007; De Rosa, 2006; Kirk, 2007; Engel et al., 2009). All healthcare institutions and organisations would be of interest to publish common clearly defined across the board. This way all health professionals would "obey" the same criteria.

The study's limitation could possibly be the number of the individuals included in each group. This is the result of the number of individuals who are trained in the department as well as the number of individuals who were happy to participate in the study. It is possible that a bigger sample would give a clearer picture.

Conclusions

It was proven, within the limitations, that students of

different healthcare disciplines have a clear understanding of professionalism, according to the GMC definitions and within the barriers of their practices. Student nurses performed better and possibly this is a result of their precognition as they are practicing active reflection during their training. Inclusion of "reflection" in the curriculum will improve greatly the understanding of professionalism.

Further education emphasizing the significance of "Health" and "Problem Dealing/Solving Training" in the professional development has to be done. Effort to educate sole practitioners on "Teamwork" will be important to patients' benefit.

A further study has to be performed using greater number of participants of all categories.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

REFERENCES

- American Board of Internal Medicine (2001). Project Professionalism. American Board, Philadelphia pp. 1-41.
- Bennett AJ, Roman B, Arnold LM, Kay J, Goldenhar LM (2005). Professionalism deficits among medical students: models of identification and intervention. Acad. Psychiatry, 29(5):426-432.
- Brainard AH, Brislen HC (2007). Viewpoint: learning professionalism: a view from the trenches. Academic Medicine, 82(11):1010-1014.
- De Rosa GP (2006). Professionalism and Virtues. Clinical Orthopaedics and Related Res. 449:28-33.
- Engel N, Dmetrichuk J, Shanks AM (2009). Medical professionalism: can it and should it be measured? Bri. Med. J. 17:161-162.
- Epstein RM, and Hundert EM (2002). Defining and assessing professional competence. J. Am. Med. Association (JAMA) 287(2):226-235.
- Eraut M (2000). Non-formal learning and tacit knowledge in professional work. Br. J. Educ. Psychol. 70:113-136.
- Gale J, Marsden P (1982). Clinical problem solving: the beginning of the process. Med. Educ. 16:22-26.
- General Medical Council (GMC) (2009). Tomorrow's doctors. GMC/TD/)914. General Medical Council, Manchester, pp 1-100.
- General Medical Council (GMC) (2015). Student professionalism: Our survey of medical students. GMC/SR-OSMS/0515. General Medical Council, Manchester, pp. 1-32.
- Hafferty FW, Franks R (1994). The hidden curriculum, ethics teaching, and the structure of medical education. Acad. Med. 69(11):861-871.
- Health Care and Professions Council (HCPC) (2014). Professionalism in healthcare professionals. HCPC, London, pp. 3-64.
- Irvine D (2005). Patients, professionalism and revalidation Br. Med. J. 330(7502):1265-1268.
- Kirk L (2007) Professionalism in medicine: definitions and considerations for teaching. Baylir University Medical Center Proceedings 20(1):13-16.
- Passi V, Doug M, Peile E. Thirstlewaite J, Jonhson N (2010). Developing medical professionalism in future doctors: a systematic review. Int. J. Med. Educ. 1:19-29.
- Redfern S, Norman I, Calman L, Watson R, Murrels T (2002). Assessing competence to practice in nursing: a review of the literature. Res. Papers Educ. 17(1):51-77.

- Reed DA, West CP, Mueller PS, Ficarola RD, Engstler GJ, Beckman TJ (2008). Behaviors of highly professional resident physicians. J. Am. Med. Association, 300(11):1326-1333.
- Roberts LW, Green Hammond KA, Geppert CM, Warner TD (2004). The positive role of professionalism and ethics training in medical education: a comparison of medical student and resident perspectives. Acad. Psychiatry, 28(3):170-182.
- Salvatori P (1996). Clinical competence: a review of health care literature with a focus on occupational therapy. Canadian J. Occupational Therapy, 63(4):260-271.
- Scottish Government (2012). Professionalism in nursing, midwifery and allied health professions in Scotland: a report to the Coordinating Council for the NMAHP Contribution to the healthcare quality strategy for NHS Scotland. Crown, The Scottish Government, Edinburgh pp 3-38.
- Schon DA. (1983). The Reflective Practitioner. Basic Books, New York. Swick HM, Szenas P, Danoff D, Whitcomb ME (1999). Teaching Professionalism in Undergraduate Medical Education. J. Am. Med. Assoc. 282(9):830-832.
- Swick HM (2000). Toward a Normative Definition of Medical Professionalism. Acad. Med. 75(6):612-616.
- Swing SR (2007). The ACGME outcome project: retrospective and prospective Med. Teacher 29:648-654.
- Talbott JA, Mallott DB (2006). Professionalism, medical humanism, and clinical bioethics: the new wave does psychiatry have a role? J. Psychiatric Pract. 12(6):384-390.
- Waheet G, Mengal MA, Shah SSA, Sheikh AW (2011). Faculty and students' perception about aptitude of professionalism in admission process of Medical College. J. Ayub Med. College Abbottabad. 23(2)166-169.
- Wear D, Biskel J (2000). Educating for professionalism: creating a culture of humanism in medical education. University of lowa Press. lowa, pp. 3-70.
- Zafiropoulos G (2016). Professionalism: An attempt to measure definition and understanding. Int. J. Med. Med. Sci. 8(5):51-61.