

What do dietetics students think professionalism entails?

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Background. Members of a profession are committed to codes of ethics and professionalism. The aim was to determine which professionalism attributes dietetics students deem important and relevant to their profession.

Methods. A total of 109 dietetics students from two universities in the Western Cape, South Africa, completed a demographic questionnaire and were required to sort a pack of cards containing 90 attributes of professionalism into 11 piles, ranging from 'least agree' to 'most agree'. An element of forced choice was introduced by restricting the number of cards in each of the 11 piles (Q-sort). PQMETHOD 2.11 was used for data analysis, ranking items by their mode score and giving an indication of which items were most consistently favoured.

Results. Professionalism attributes considered most important included *Protect confidential information, Trust, Respect patients' right of shared decision making, Honesty, Good clinical judgment, Communication skills and Carry out professional responsibilities*. Interpersonal professionalism attributes were considered more important than intrapersonal or public professionalism.

Conclusion. This study suggests that professionalism attributes are not attained continuously for dietetic students. The findings should form an integral part of dietetic and other health sciences curriculum planning to ensure that the assessment of these attributes is relevant and consistent with development over the years.

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Introduction

A profession ('a dedication, promise or commitment publicly made'¹) is an occupation whose core element is work based upon the mastery of a complex body or knowledge of skills. It is a vocation in which knowledge is used in the service of others and its members subscribe to codes of ethics and professionalism. These commitments form the basis of a social contract between a profession and society, which in return grants the profession the use of its knowledge base, the right to considerable autonomy in practice and the privilege of self-regulation.²

Professionalism encompasses a number of attitudes, values and beliefs. In addition to the minimum requirements involved in mastering appropriate expertise and technical abilities, students and practitioners are expected to demonstrate a defined set of professional 'competencies'.³ There are many different qualifications for the definition of professionalism within the scope of health sciences, most of which concur with the central themes of competence, commitment to the highest standard of excellence, integrity, honesty, morality, ethics, altruism, accountability, honour, autonomy, self-regulation, responsibility and respect for patients, society and the profession.²⁻⁶ There is a vast body of evidence that the medical profession

has invested considerable time and resources globally to inculcate professionalism among medical students, but little evidence that other health professional groups have taken up this challenge.⁴

The Health Professions Council of South Africa (HPCSA) was established by statute (Health Professions Act 56 of 1974, South Africa) to provide for the control over the training, registration and practices of South African practitioners of 12 health professions, including dietetics. Registration as a health care practitioner with the HPCSA confers on a practitioner the right and privilege to practice a profession and requires a lifelong commitment to good professional and ethical practices and an overriding dedication to the good of one's fellow humans and society. In this spirit the HPCSA has ethical guidelines to which practitioners are required to adhere, which underlie professional and ethical practice. The Professional Board for Dietetics in South Africa requires certain generic skills for dietetics graduates⁷ and in 2008 the South African Standards Generating Body (SGB) compiled minimum exit outcomes for the curricula of dietitians which include the professional attributes which students need to demonstrate upon completion of the degree.

Box 1. Ninety attributes of professionalism – themes according to Van de Camp's three-fold model of professionalism

Interpersonal attributes	Public attributes	Intrapersonal attributes
Meeting the demands for adequate contact with patients and other health care professionals	Meeting the demands society places on the professional	Meeting the demands to function in the profession as an individual
Altruism or selflessness	Accountability	Absence of impairment
Ask help when necessary	Adherence to guidelines	Being well-organised
Avoiding misuse of power	Autonomy of professional associations	Courage
Benevolence*	Be knowledgeable	Critical analysis
Be responsive to patients' and colleagues' age, gender and disabilities*	Blow the whistle if necessary	Critique
Be sensitive	Calling	Deal with high levels of uncertainty
Be thoughtful	Carry out professional responsibilities	Flexibility
Caring	Clear professional values	Goodwill
Communication skills	Commitment	Good clinical judgment
Compassion*	Commitment to continuity of care	Know limits of professional competence
Educate patients*	Competence	Lifelong learning
Give patients information they understand*	Deliverance of quality	Maturity
Honesty#	Duty	Morality
Honour	Enhancing welfare of community	Motivation
Integrity#	Excellence	Not letting personal beliefs influence care
Interpersonal skills	Expert authority	Self-awareness
Not ripping people off	Fight for and guarantee standards	Self-improvement
Participation	Faith in life's meaning and value	Temperance
Relationships with colleagues/team	High level of expertise	Value dietetic work intrinsically
Reliability#	Humanistic values	Virtue
Respect#	Humility	
Respect patients' right of shared decision making*	Justice	
Response to instruction	Leadership	
Responsibility#	Method and thoroughness	
Sensitivity to a diverse population	Negotiation	
Service	Professional awareness and sensitivity	
Suspension of self-interest	Professional conduct	
Tolerance#	Protect confidential information	
Treat patients politely*	Response to stress	
Willingness to admit errors in judgment	Self-regulation	
Willingness to take time to complete work#	Self-regulation	
	Simplicity	
	Social contract	
	Submission to an ethical code	
	Technical competence	
	Transparent rules	
	Trust	
	Understanding history	
	Use of explicit standards	

*Ethical patient care.

#Positive personal attributes.

Influencing the development of character traits and behaviours associated with professionalism remains one of the most difficult core content areas in health professionals' education.⁸ It has been suggested that the primary means to harness professional behaviour is through the experience of early clinical contact.⁹ The proposed ideal time for appropriate assessment of professional behaviour may be during the student's internship, when practitioners have the opportunity to move professionalism into the forefront by direct observation and implement systematic approaches to lowering the incidences of professional error.⁶ The assessment of professionalism has been reported as being a complex, multistage task that involves observation, description, and the determination of values,³ probably best described by David Stern, who describes professionalism as 'something hard to define

but recognisable when observed'.⁵ It is therefore clear that there is a need to develop teaching and assessment methods regarding professionalism among undergraduate health professional students.⁴

During the dietetics undergraduate programme, students' 'professionalism' is assessed at various stages of their development and progression throughout the programme. Based on this assessment, graduates are provided with a reference from the university regarding their professionalism, which potential employers may use to make a decision regarding the employability of the person. It is important to note that the emergent trend in terms of employability of health professionals is that although technical skills are still essential, employers increasingly expect strong 'generic/soft skills' indicative

of good character traits and a positive work ethic. It is therefore essential that the assessment of these attributes is relevant and consistent with the student's development over the years. Furthermore, it is acknowledged that educators have a fundamental role as gatekeepers to the profession, ensuring that graduates act professionally.¹⁰ The acknowledged difficulty with instruments currently used to assess professionalism is that the instruments focus on a seemingly unassailable set of attributes which students are expected to attain. It seems also that the attainment of these attributes is not instantaneous, indicating the need to determine whether it is continuous or staged over the years of study.¹¹

Taylor advises that the 'theory of professionalism must be constructed in dialogue with those we are instructing' and as such, the first step is to determine what students understand by the term 'professionalism'.¹² To take up this challenge for dietetics, this observational, cross-sectional descriptive study determined which attributes of professionalism dietetic students deem important and relevant to their profession. The objectives were to identify the professionalism attributes deemed most important, to classify attributes within the themes of interpersonal, public or intrapersonal professionalism and to determine whether the attainment of these professionalism attributes is continuous or staged over time.

Methods

All students registered for a four-year BSc Dietetics course in the Western Cape (offered by Stellenbosch University and the University of the Western Cape) during 2007 and willing to participate, were included in the sample. The estimated sample size of 163 was calculated as a representative sample of the 1 068 dietetics students registered nationwide in 2007 (95% confidence level and 7% error). Students had to be able to understand English or Afrikaans, as these are the language mediums of the universities involved.

The validated Q-sort methodology previously used in a study conducted with medical students at the School of Medical Education, Liverpool University was followed.¹² The 90 professionalism attributes identified by Van de Camp *et al.* are the basis of the study.¹³ The investigators of this study did not edit the list of attributes as it was clear after consultation of the International Code of Ethics and the International Standards of Good Practice in Nutrition and Dietetics,¹⁴ that all professionalism aspects specifically related to dietetics were included in the list of 90. An addition rationale not to change the attributes list was to be able to draw comparisons with other studies.

The 90 attributes (Box 1) were translated into Afrikaans and a definition for each item was developed in both languages. These translations and definitions were peer-reviewed by three registered dietitians and face-validated during the pilot study. The pilot study included six registered dietitians from the Division of Human Nutrition, Stellenbosch University as respondents. The pilot study also field-tested the procedures to ensure smooth implementation.

During a brief information session to each year group at the two universities, students were requested to allow half an hour to complete the task. Each class was provided with an appointment sheet on which students were requested to select one half-hour slot. The 90 attributes, each on a separate card (in English and Afrikaans) were given to the student. The students were then asked to sort the cards into 11 piles, ranging from 'least agree' to 'most agree'. The number of cards allowed in each pile was restricted to a specific number

per pile (Fig. 1) to introduce an element of forced choice so that the overall pattern conformed to a normal distribution – this is called a Q-sort. The strength of the Q-sort is that it forces people to identify concepts that they feel are important from a large list. Detractors from Q-sort claim that most Q-sorts are performed on too few subjects to yield enough statistical power to justify such detailed analysis. However, Q-sorts have been shown to have a high test-retest reliability (better than 0.8), and remain stable over a number of years (under controlled conditions).¹⁵

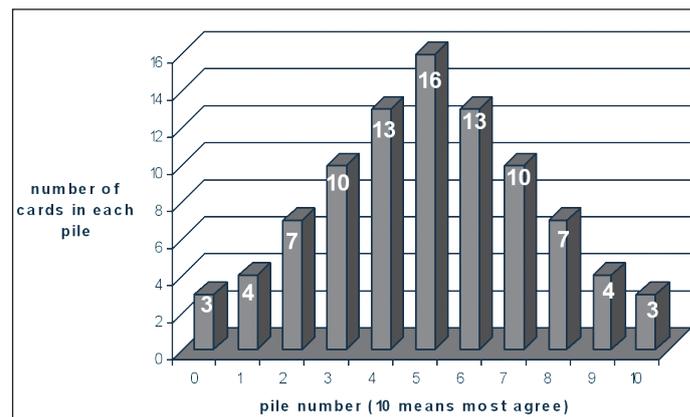


Fig. 1. Distribution of cards used in a 90-item Q-sort.

In performing the Q-sort, a quiet environment was chosen, with a table and a chair per student. Up to six students completed the task simultaneously with six different sets of cards. After signing the informed consent form and completing the demographic questionnaire in either English or Afrikaans, each individual student was given a pack of cards containing the statements. The task was explained using a standardised script. A template for packing the cards, indicating the pattern of forced choice, was provided to ensure that students all got the same instructions. Students performed the task separately, without discussion. The students were given as long as they needed to sort the cards into piles relating to the extent to which they agreed with each statement. They were allowed to consult a standardised list of terms and definitions (in English and Afrikaans) and were allowed to change their mind about the position of individual cards between piles. Each pile had to contain the requisite number of cards before the task was considered as completed. The research assistant then recorded the position of each statement on the template onto a data-capturing page for each student. Each student was allocated a unique identifier to link to the demographic data that were held separately. Ethics approval was provided by the Human Research Committee, Faculty of Health Sciences, Stellenbosch University (Project no: N07/08/183).

Data analysis

Data were analysed using descriptive statistics (frequencies and percentages) for demographics. The PQMETHOD 2.11 programme was used to input and analyse the Q-sort data (scoring from 0 for 'least agree' to 10 for 'most agree'). The attributes were then ranked by their mode score, giving an indication of which items were most consistently favoured, or dismissed as unimportant.

The 90 professionalism attributes were further classified according to three themes namely interpersonal professionalism (meeting the demands for adequate contact with patients and other health care professionals), public professionalism (meeting the demands society places on the profession)

and intrapersonal professionalism (meeting the demands to function in the profession as an individual) (Box 1).¹³ The mean modal value for each of the themes was compared using ANOVA at a significance level of $p < 0.05$ across all four years and per year group. The Bonferonni test was used when more than two levels of the nominal variable were involved.

Results

Of the 163 registered dietetics students at the two selected universities, 109 (67% response rate) participated in the study. The majority of the students were first-year students ($N=35$, 32%) followed by 30 (28%) second-year students, 26 (24%) fourth-year students and 18 (17%) third-year students. The sample was mostly female ($N=99$; 91%) which is consistent with the demographics of the profession.¹⁶

Professionalism attributes

Students ($N=109$) sorted the 90 professionalism attributes according to the Q-sort providing a normal distribution. Results show that the attributes of *Protect confidential information*, *Trust*, *Respect patients' right of shared decision making*, *Honesty*, *Good clinical judgment*, *Communication skills* and *Carry out professional responsibilities*, were deemed the most important (mode above 7) according to the mode score achieved (Table 1).

When comparing the mean modal value for the three themes per year group (Fig. 2), it seems that the interpersonal professionalism attributes are deemed more important throughout the four years as compared to public and intrapersonal attributes. This gap increases especially after the first year when all three themes of professionalism appear almost equally important to the students. Public and intrapersonal themes of professionalism are of fairly equal importance throughout the four years of the course. In the third year there is a statistically significant difference between interpersonal and intrapersonal professionalism attributes ($p=0.0405$).

Table 1. Mode scores of professionalism attributes indicating the most agreement (7 and above on a scale of 0 - 10) and least agreement (3 and below) for dietetics students ($N=109$)

Professionalism attributes	Mode
Most agreement (mode of 7 or more)	
Protect confidential information	8
Trust	7
Respect patients' right of shared decision making	7
Honesty	7
Good clinical judgement	7
Communication skills	7
Carry out professional responsibilities	7
Least agreement (mode of 3 or less)	
Appreciate literature and arts	0
Understanding history	0
Simplicity	2
Critique	3
Humility	3
Social contract	3
Transparent rules	3

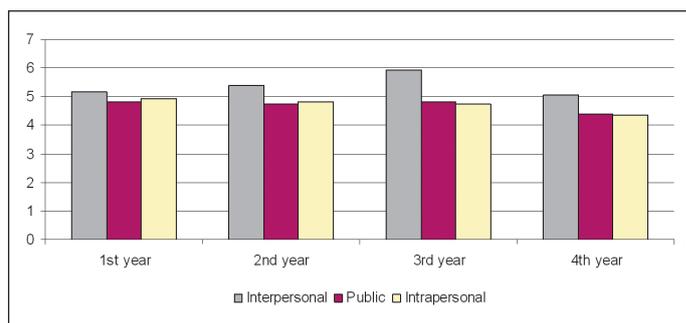


Fig. 2. Mean mode values for the three themes of professionalism (elements of Van de Camp's model) over the BSc Dietetics course.

Within the **interpersonal** attributes regarding adequate contact with patients and other health professionals, 15 attributes were rated more important (mode >7) in at least one of the years of study. Attributes related to ethical patient care as well as positive personal attributes and *Communication skills* were identified as most important. The positive personal attributes of *Respect* and *Reliability* as well as *Compassion*, *Patient education*, *Respecting shared decision-making* seem to become more important in the third year when students start interacting with patients. In the fourth year, the most important attributes were *Responsibility* and *Reliability* possibly as a result of students' more reflective stance.

Fewer (10) of the **intrapersonal** professionalism attributes regarding being able to function in a profession as an individual, were deemed more important (mode >7) in at least one of the years of study. *Good clinical judgment* was consistently deemed important over the four years. Interestingly, attributes such as being *Well-organised*, *Temperance* and *Valuing dietetic work intrinsically* were deemed important in the first year, but not as important in any of the consecutive year groups. During the second year, *Lifelong learning* and *Morality* were deemed most important and in the third year this changed to *Flexibility* and *Not letting personal beliefs influence care*. At the graduate stage of the fourth year, issues of *Motivation*, *Knowing the limits of professional competence* and *Lifelong learning* became the most important attributes.

Fifteen of the **public professionalism** attributes regarding meeting the demands of society, were deemed more important (mode >7) in at least one of the years of study. *Protecting confidential information* was deemed as important for the first three years of study. In the first year of study, the attributes of *Being knowledgeable*, *Commitment*, *Delivering quality*, *Continuity* and *High levels of expertise* were deemed most important. In the second year of study the other attributes of dietetics being a *Calling*, *Professional conduct*, *Competence* and *Thoroughness* became important. In the third year of study, *Being knowledgeable*, *Excellence*, *Professional conduct* and *Responsibility* were deemed most important. The emphasis shifts for public attributes in the fourth year of study when *Competence* and *Carrying out professional responsibility* is seen as most important and having *Clear professional values* and *Fighting for and guaranteeing standards* become important. It is interesting that the feeling of dietetics being a 'calling' becomes a lot less important at this stage.

Discussion

Although a smaller sample size of 109 dietetics students participated, the sample can still be seen as representative of dietetics students nationally

(95% confidence level and 9% error). The professionalism attributes deemed most important by the dietetics students are in agreement with the attributes outlined in the most relevant documents to dietetics^{7,14} stipulating the minimum requirements for qualification as a dietitian.

In comparison with the mode scores obtained by medical students in the Liverpool study following the same methodology as this study,¹² it is evident that many of the key professional attributes are common between the two groups (Table 2). Similar findings were also found for physical therapy programmes in Australia.⁴ There appears to be small differences in emphasis where some aspects are deemed more important but not necessarily unimportant when forced to make a choice. Although the HPCSA does not differentiate between health professionals in SA regarding professional and ethical guidelines, it may well be that different health professions use different terminology and concepts and have varying natures of liability which could influence the understanding of certain attributes. *Competence* for example was scored lower by dietetic students. One possible explanation is that medical students usually specialise after graduating whereas dietetics students are expected to have expertise in all three areas of dietetics upon graduation, resulting in a different concept of competence. An interesting aspect for future investigation would be whether the fact that dietetics is a female-dominant profession has any impact on the importance of specific professionalism attributes.

The finding that dietetics students favour the interpersonal professionalism attributes, especially in the third year, is corroborated by the study done among medical students,¹² and it is perhaps unsurprising as this is when the dietetics students start to experience a great deal of patient contact. It is clear that the attainment of professionalism aspects is staged across the four years of study. Some attributes remain important throughout, but others seem to be dependent on the students' exposure to patient care and the level of responsibility. In the first year, students have almost no patient contact and courses are generally basic theoretical components with little application, making assessment of professionalism by faculty basically impossible. These

first-year students seem to feel that meeting the demands of other people is equally as important as meeting those of society in terms of commitment and expertise and inwardly such as being well-organised. In the second year, students may have very limited patient contact, mostly on an observational level, resulting in little opportunity for assessment of professionalism by faculty. They are however exposed to seeing other professionals 'at work', which may explain why they feel *Professional conduct* and *Competence* are more important and dietetics is seen as a 'calling'. They also seem to realise the value of lifelong learning, which has been reported for medical students who are said to acquire an understanding of the need for lifelong commitment towards keeping abreast with the constantly changing advances in medical science and technology.¹⁷ Moral values seem to become more important, which may possibly be as a result of the broader social and cultural context that these students are increasingly exposed to. The shift of emphasis on personal attributes versus practice is supported by the third-year students, indicating that *Flexibility* and *Not letting personal beliefs influence care* became more important. In the third year students start becoming involved in patient care in various settings and it is clear that this influences their interpretations of professionalism at this stage. Attributes that relate to the feelings and behaviour towards the patient and positive personal attributes regarding *Expertise* and *Excellence to meet societal expectations* become very important. It is also at this stage that there is a significant emphasis on the interpersonal professionalism attributes. During the final year students enter an internship where they have daily contact with patients, the community and/or other health professionals and their professionalism is assessed continuously in terms of these interactions. At this stage the students seem to turn a little inward and start rating attributes such as being *Responsible*, *Reliable* and *Competent* as most important but also *Knowing your own limits* and realising that this is a lifelong journey that requires the professional to have clear values and provide a high standard of service.

Conclusion

The professionalism attributes that dietetics students deem important are in line with what is required by the professional dietetics bodies and associations for dietetics graduates. The key professional attributes deemed most important by both dietetics and medical students are: *Communication skills*, *Honesty*, *Good clinical judgment*, *Protect confidential information*, *Respect rights of patients' shared decision making* and *Trust*. Dietetics students also followed the same trend as medical students in that interpersonal professionalism is considered more important than attributes of intrapersonal or public professionalism. Clearly, the attainment of professionalism attributes are not continuous but staged over time, differing between years of study.

It is recommended that further research is conducted to determine whether those attributes deemed as important while studying, change with work experience. Furthermore, to determine whether the various work spheres of dietetics such as academia, therapeutic dietetics, community nutrition or food service management, would influence which attributes of professionalism are deemed most important. Ultimately, a tool could be devised to provide an index of professionalism against which student progress could be mapped, in order to shape graduates who are competent and equipped for professional life.

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Table 2. Mode scores of professionalism attributes deemed most important by medical students in the Liverpool Study (N=99) as compared to dietetics students in the Western Cape study (N=109)

Professionalism attribute	Medical	Dietetics
Competence	10	6
Communication skills	8	7
Ask for help when necessary	8	6
Give patients information they understand	8	6
Honesty	8	7
Professional conduct	8	6
Good clinical judgment	7	7
Protect confidential information	7	8
Know limits of professional competence	7	6
Respect patients' right of sharing in decision making	7	7
Integrity	7	4
Trust	7	7

learning and teaching). The authors declare that they have no competing interests.

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