PROFESSIONALISM: A NEW APPROACH TO AN OLD PROBLEM

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ABSTRACT

This study examined student understanding and the ability to apply the six tenets of professionalism for pharmacy students before and after an educational intervention. The study population was third and fourth year pharmacy students at the North Dakota State University. Paired *t*-tests and *z*-tests were used to analyze the data. The results show that students were able to significantly improve their understanding of all of the six tents. Students were able to slightly improve their ability to apply all of the six tenets, with the exception of accountability, which showed a slight decrease. Differences between the third and fourth year classes was not significant. Gender differences were also not significant.

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DEDICATION

I would like to dedicate this thesis to my parents, Herb and Sallie Blue. Who knew that I would follow in your footsteps to both obtain a master's degree and teach! I love you both very much!

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LIST OF ABBREVIATIONS

AACP.....American Association of Colleges of Pharmacy

ABIM.....American Board of Internal Medicine.

ABFM.....American Board of Family Medicine.

ACA.....Affordable Care Act.

ACCP.....American College of Clinical Pharmacists.

ACPE.....Accreditation Council for Pharmaceutical Education.

APhA.....American Pharmaceutical Association

ASHP.....American Society of Health Systems Pharmacists.

ASP.....Academy of Student Pharmacists.

BPA.....Behavioral Professionalism Assessment.

CAPE.....Center for Advancement of Pharmaceutical Education.

MD.....Doctor of Medicine.

NAPLEX.....North American Pharmacy Licensure Exam.

NDSU.....North Dakota State University.

M1P1.....First year medical student, first year pharmacy student.

M2P2.....Second year medical student, second year pharmacy student.

M3P3.....Third year medical student, third year pharmacy student.

PA.....Physician's Assistant.

PAT.....Professionalism Assessment Tool.

PharmD.....Doctor of Pharmacy.

PT.....Physiotherapy.

CHAPTER 1: INTRODUCTION

The healthcare industry has experienced dramatic changes over the past two decades. Of particular note is the Affordable Care Act (ACA) of 2014, which expanded health services, including pharmacy services, to millions of Americans. During this same timeframe, the profession of pharmacy has advocated successfully to expand the scope of practice for pharmacists to include not only the traditional dispensing activities but also blood pressure screening, immunization administration, physical assessment and a variety of point of care testing such as HIV and Streptococcus. This expanded scope of practice combined with greater emphasis on cost containment and enhanced quality of services has placed pharmacists on the front lines of patient care.

To maintain and expand scope of practice, pharmacists must ensure that they maintain strong patient relationships. To do so requires continual patient engagement. Inherent in such relationships are affective skills, such as good communication, teamwork and respect.

As pharmacists struggle to provide a larger set of patient care services, with the same or fewer resources, the perception is that healthcare provider standards of care are declining (ASHP, 2007). There is also a growing perception that standards of care, especially as they relate to positive patient interactions, are declining. These perceptions may jeopardize patient relationships which may, in turn, jeopardize patient care.

According to the Oath of the Pharmacist patient well-being is a top priority. The pharmacy profession bases its concept of professionalism on “trust”, which emphasizes the pharmacist knowing her or his the patients well and establishing a rapport with those patients. This is the basis for pharmacy’s social contract with society, and is one reason to justify the need for licensure. As the profession evolves, and pharmacists are held to new standards of

accountability with respect to cost containment and quality control, there is also a corresponding change in the public's definition of "trust" and how pharmacist behaviors enable that "trust" through positive patient relationships. Put differently, with greater opportunity comes more scrutiny of pharmacist behaviors and how these behaviors impact the patient's health and well-being (Tanzer & Dintzner, 2017).

Education in the Health Professions

Education in the health professions, including pharmacy education, is unique in that it devotes 20-40 percent of the curriculum to experiential education (ACPE, 2016). The experiential portion of the curriculum is different from the didactic portion and takes place in fully operating medical facilities of various settings (Richter, L., 2019 & Undem, T., 2019). These facilities contract with schools to provide rotations. Rotations are supervised by preceptors who are classified as adjunct faculty and who have the responsibility of helping students take book knowledge and put it into practice. Most preceptors in medicine are licensed in their chosen fields. Preceptors practicing in research facilities may not be licensed as a practicing pharmacists but are still appropriate preceptors.

When students transition from the didactic to the experiential portion of the curriculum, the change is immediate. Students are expected to behave professionally in a way that may be much different from how they behaved during the didactic portion. This change may not be what the student expects or understands which may lead to conflict based on preceptor expectations for professionalism behaviors. Preceptors may be paid or unpaid volunteers, depending on the school. Unpaid preceptors have less tolerance for unprofessional behavior. When preceptors volunteer their time, the expectation is that students will arrive, ready to learn and behave as a professional. Many preceptors feel that it is not their responsibility to teach professionalism

behaviors (Thompson, Farmer, Beal, Evans, Melchert, Ross & Schmoll, 2008). Examples of unprofessional behaviors during the experiential portion of the curriculum may include chronic tardiness, failure to engage as part of the patient care team, HIPAA infractions, theft, argumentative interactions with facility staff or disrespectful interactions with patients.

Perceptions of Declining Professionalism in Healthcare

While models of healthcare are evolving, there is also a decline in social values and acts of incivility are increasing in society in general (Hammer, D., Berger, B., Beardsley, R., & Easton, M., 2003, Sylvia, 2004, Tanzer & Dintzner, 2017). As members of society, healthcare providers, including pharmacists, are not immune from these changes. The health education literature contains numerous articles describing unprofessional behaviors among physicians, nurses, dentists, physiotherapists (PT), and pharmacists, among others. The majority of these articles pertain to pharmacy and medicine (MD, OD, PA, etc.).

More specifically, literature identifies several key issues including poor time-management, lack of confidentiality, working above scope of practice and a lack of respect toward patients, colleagues, subordinate coworkers and students. From 1995-2005 articles about professionalism quadrupled on the PubMed database alone (ASHP, 2007, Chisholm, M., Cobb, H., Duke, L., McDuffie, C., Kennedy, W., 2006, Hammer, 2004). This indicates that there is either a decline in professionalism behavior in healthcare or, at the very least, an increase in the awareness of professionalism as well as an increase in the reporting of unprofessional behaviors. Regardless of which of these is true, professionalism must be examined.

One theory for the decline in professionalism is the changing demographics of student populations. Students usually enter the pharmacy program at around 21 years of age with attitudes and values well-established based upon upbringing and experiences occurring prior to

admission to a pharmacy program (Kelley, et. al., 2011). All incoming college students, including pre-professional pharmacy students, tend to be more book smart but less resilient than students twenty years ago (Debard, R., 2004, Keener, A., 2020). These students may also have lower levels of mental and emotional well-being, that if not properly addressed may persist into the student's professional pharmacy career.

Another popular theory in the literature is student entitlement (Holdford, 2014). Students who feel entitled make up a small but vocal group within the student body. These students often feel that learning is a right, not a privilege and educators are responsible for student learning. Related to entitlement is the theory of consumerism (Holdford, 2014). Consumerism by students is displayed when a student pays tuition for a course and feels he or she is 'owed' success. Both entitlement and consumerism by students indicate that students may not fully understand (or care) what it means to be health care provider, including the responsibilities and obligations professionals and of professionalism behaviors inherent to the career.

Perceptions of Professionalism Decline in Pharmacy Education

The aforementioned lack of civility also impacts pharmacy education. There is a perception that the level of professionalism in pharmacy students is declining and the number of unprofessional infractions is increasing, or at the very least, are more frequently reported (Chisholm et. al., 2006, Hammer, 2004, Thompson et. al., 2008). These unprofessional behaviors surface in the classroom setting during the didactic portion of the curriculum and during the experiential portion. Unprofessional behaviors during the didactic portion of the curriculum may be academic dishonesty, arriving to class late or not at all, arguing for additional points on an exam, or disrespectful communication. Preparing future pharmacy students for a career where

expectations for professionals are already very high and ever-increasing becomes a major challenge.

During pharmacy school, students will spend at least 1440 hours working with adjunct faculty at practice sites providing patient care to actual patients or performing pharmacy-related research. While students are taught elements of professionalism during the didactic portion of the curriculum, it is during the experiential portion that essential learning to put those elements into practice happens (Montrouxe, et. al, 2014). Given these observations, it is important to explain why and how students are expressing greater incivility in the classroom, leading to students exhibiting a lack of professionalism behaviors in practice.

Defining Professionalism

Professionalism and professional behavior are not new concepts, having been discussed in the literature for decades. In the 1950s professionalism, in general, was based upon structural characteristics such as being prestigious, having specialized knowledge or training, and being governed by peers (Hammer, 2006). By the early 2000's, the American Board of Internal Medicine (ABIM) was attempting to clarify professionalism in medical education (Chisholm et. al., 2006). ABIM defined three required elements of professionalism. These elements are commitments to excellence, interest and welfare of patients, and a responsiveness to the needs of patients. ABIM further described six tenets that must be present to fulfill these elements. With academic pharmacy's support, the ABIM detailed these six tenets as: altruism, accountability, excellence, duty, honor and integrity and respect for others. These six tenets have since also been adopted by pharmacy as descriptors of professionalism (ACCP, 2009, Chisholm, et. al, 2006). These tenets meld well with the traits detailed by the APhA/ACCP task force. Using a reference detailed in the literature by Hammer, et. al. (2003) to describe how the tenets fit into

professionalism, picture a bicycle wheel. The center of the wheel, the hub, represents the six tenets of professionalism which are the core values of professionalism. Each of the spokes stretching out to the rim represent the traits or behaviors displayed by a person. The tire is the outward trappings, hygiene, dress, punctuality, etc. The hub, spokes and tire are not interchangeable and a lack of one affects the other, however, the single most import of the three is the hub (values). Addressing values is necessary to influence behaviors and outward trappings. This visualization helps to quantify professionalism a bit, but still does not yield a solid definition of professionalism.

Defining Professionalism in Pharmacy

A key element of pharmacy service is professionalism (Kelley, et. al., 2011). A key element to any good relationship is trust and this trust is specifically addressed in several pharmacy-specific contexts. The Code of Ethics for Pharmacists states that pharmacists "have moral obligations in response to the gift of trust received from society" (APhA, 1994). The Oath of a Pharmacist does not specifically address professionalism (AACP, 2007). The Oath is a series of 'I will' statements built around the patient care and the evolution of patient care. The Pharmacist's Pledge of Professionalism is specifically tailored to pharmacy students (APhA, 1994). The pledge is a charge to students to develop, foster, support, incorporate and maintain the highest ideals of professionalism. If professionalism and patient care go hand in hand then it is essential that the profession of pharmacy find a solution to declining professional behaviors as pharmacist roles continue to expand.

Professionalism in pharmacy is more about specific behaviors such as being empathetic, exceeding expectations and committing to life-long learning. In the last ten years, accreditation organizations have begun to address professionalism behaviors in healthcare programs

(medicine, nursing, pharmacy, etc.). In 2013 the Accreditation Council for Pharmacy Education (ACPE) published its most recent edition of the educational standards that pharmacy schools must abide by and meet. Standard 4, of 25, is devoted to personal and professional development. Within this standard is specific language stating "Professionalism-The graduate is able to exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers and society" (ACPE, 2013). Example activities are provided in a guidance document but no example actions, attitudes or behaviors are listed. This omission leaves the defining of professionalism up to the schools. Previous standards also mentioned professionalism, but in a superficial manner (i.e. "promote professional behavior and harmonious relationships" (ACPE, 2011).

To define and assess professionalism in pharmacy, Dana Hammer (2000) published an article detailing the creation and testing of an instrument to assess professionalism in pharmacy students. This instrument included 25 items that were used to collect information on student reliability, hygiene, quality of work, empathy, ethics, articulation, punctuality, time management, self-directedness, confidentiality, respectfulness, communication skills, accountability, reception to feedback, confidence, appropriately attired, cooperative, diplomatic and the ability to follow through on an activity. These items are common descriptors of professionalism, or the lack of professionalism, depending on the student presentation of the descriptor. Each of the descriptors is subjective in nature, meaning that student scores by preceptors on these items have the potential to vary greatly based upon the evaluator and may even vary based upon the day and/or mood of the evaluator. In order to reduce this subjectivity, an instrument would need to be highly descriptive of what is and is not acceptable. Such an instrument would likely be so large that the length of the instrument would be a barrier to completion of the survey.

In the face of growing concern regarding poor behaviors in pharmacy students and in an effort to manage the number of descriptors, the American Pharmaceutical Association (APhA) and the Academy of Student Pharmacists (ASP) partnered with the American Association of Colleges of Pharmacy (AACP) to provide and suggest resources for students and educators to promote and assess professionalism (Chisholm, et. al, 2006). Ten broad traits were used to describe professional behavior by pharmacy students. These ten traits were accountability for actions, commitment to self-improvement, conscience and trustworthiness, covenantal relationship with patient, creativity and innovation, ethically sound decision-making, knowledge and skills of a profession, leadership, pride in profession and service oriented. When these traits are put into practice as behaviors, they result is a specific type of demeanor in which patients are interacted with, often referred to as a level of professionalism. Accordingly, the higher the level to which a person implements these traits also translates to a greater level of professionalism (i.e. going to ten development seminars versus one development seminar).

Increasing Professionalism in Pharmacy Education

In order to instill and promote professionalism behaviors, there must be a way to identify the appropriate behavior(s). Unfortunately, no clear, unified definition of professionalism in healthcare exists in the literature, although several authors have tried to define it. Professionalism is more of a concept, easy to identify actions that fit the concept but difficult to define. Efforts at definition have been made by Chisholm, et. al., (2006), Hammer (2004), Montroux, et. al (2014) and Tehrani et. al. (2005), among others. These authors have collectively identified unprofessional behaviors such as the inability accept feedback, arrogance, over confidence, dishonesty, argumentativeness, irresponsibility, lack of initiative, having poor patient relationships. Additionally, these authors have linked personal qualities such as poor dress or

appearance and poor hygiene to markers of unprofessionalism. While these characteristics are descriptors of professionalism, they are not a working definition. These characteristics cannot be objectively assessed using common assessment types such as reports, evaluations, reflections or survey instruments.

It cannot be assumed that schools are taking this decline in professionalism lightly by doing nothing. Schools have been attempting to tackle the issue of professionalism. Development of a method of teaching professionalism and developing students in such a way that they are able to consistently model professional behavior in all situations, both didactic and experiential is a lofty goal. In a survey by Sylvia in 2004, pharmacy schools were surveyed to determine what measures were commonly used among the academy. At the time, sixty-two percent of existing schools responded. Most of the responding schools had a White Coat Ceremony, student handbooks, dress codes, mission and vision statements and a conduct committee of some type. A small number of responding schools had professionalism advisory committees.

The White Coat Ceremony is a symbolic, public acknowledgement of a student's desire to shoulder a commitment to public service as a pharmacist. It is an introduction to students of the responsibilities, commitments and values expected of a pharmacist. Students are given their first white coat, the symbol of a pharmacist and students pledge to serve the public, their patients. It is the first time that students take the Oath of a Pharmacist. It is a solemn occasion to impart the seriousness of the journey they are beginning. Additionally, dress codes are common in pharmacy. Students in experiential settings are required to dress in a professional manner for all experiential activities. Interestingly, students do not agree as strongly as faculty that these items are important markers of professionalism (Thompson, et. al, 2008).

To further improve professional behaviors among pharmacy students, first there must be an understanding of what students know and understand. Once that information is available, the next step is to provide educational materials centered on the common components of professionalism as defined by the profession of pharmacy. This educational material should then be followed by assessment of new knowledge gained from the experience. An increase in knowledge is expected to lead to a change in behaviors.

This study will explore the theory that students lack self-awareness or knowledge of what the profession considers unprofessional behavior. To test this theory student knowledge regarding professionalism were assessed both prior to and after a professional development activity aimed at increasing knowledge of professionalism. To define professionalism for this study, the Six Tenets of Professionalism for Pharmacy Students was used. These tenets are altruism, accountability, duty, excellence, honor and integrity and respect for others. Students completed a pre-test to see what level of understanding is present in regard to definitions of each tenet and applicability in the form of case-based scenarios. After completion of the pre-test, a brief educational PowerPoint was provided to define each tenet as found in the pharmacy literature and the Merriam Webster Online Dictionary. Application definitions were provided from the Oath of the Pharmacist and the pharmacy literature. After reviewing the educational material, students were given a post-test. Pre- and post-test answers were compared.

Statement of the Problem

It is unclear whether pharmacy students understand the expectations of professional behaviors, particularly as the field lacks a clear definition of professionalism. It is also unclear whether a simple professional development opportunity can have a meaningful, positive impact on students' understanding of professionalism.

Statement of the Purpose

The purpose of this study was to assess student's knowledge regarding expectations of professional behavior according to Chisholm's six tenets and to determine whether professional development concerning these tenets leads to improved knowledge.

Research Questions

In order to achieve the purpose of the study and address the underlying problem, the following research questions were explored:

Research Question #1. At the time of the pretest, do students understand the meaning of each of Chisholm's six tenets of professionalism and can students recognize these tenets in case-based learning activities?

Research Question #2. Does understanding of the six tenets of professionalism improve when students are provided educational materials related to Chisholm's model?

Organization of the Study

Chapter 2 presents a review of relevant literature, particularly in the areas of professionalism in the health professions, both students and professionals. Chapter 3 provides an overview of the methods used to answer the research questions. Chapter 4 provides an analysis of the results by comparing within-subject *t*-tests and *z*-tests. Chapter 5 discusses the findings and their implications for professional practice in pharmacy education.

CHAPTER 2: LITERATURE REVIEW

Medical ethics have been discussed and debated in the literature since the time of Socrates (Jennings, 2014). Common themes among this literature are the use of morality, ethics and professionalism. While these terms certainly have similarities, they are inherently different. Morality is an individual's process of determining if an action is right or wrong. Ethics are moral principles that determine how an individual will behave in a given situation. Professionalism is the level of competence of the individual in a given situation. An individual's moral make up will play a part in the development of their ethical beliefs. Morality and ethics may also play a part in how an individual views the importance of professionalism.

Locke and others have applied medical ethics to the roles and responsibilities (including duties of self-regulation) of clinicians which led to the notion of a social contract (Locke, J., Hume, D., & Rousseau, J., 1947). This unwritten agreement is based upon the idea that both parties benefit while at the same time both parties give something up in return for this benefit. In the health sciences, healthcare professionals receive respect from patients, generous reimbursement, and status within their respective communities. At the same time, they give up a level of autonomy by being required to obtain licensure and conform to certain profession-specific norms of practice. Additionally, healthcare workers commit to a lifetime of learning. Conversely, patients receive quality health care provided by competent healthcare workers while giving up less expensive health care options. In contemporary language a social contract is an agreement between two parties where each party has certain expectations of the other. An example of a social contract in the health sciences is between the healthcare provider and the patient. The healthcare provider is given certain privileges by the patient (and society) in return for being taken care of in a competent and professional manner (ABFM, 2020). Included in these

privileges are respect, financial rewards, and the ability to self-regulate and practice autonomously. In return for these privileges, society has unwritten expectations of its healthcare workers. These expectations include providing high quality patient care by practicing competently, altruistically, honorably, ethically, and morally, all framed around the norms of the profession. In healthcare, the licensure process of healthcare workers is administered and overseen by respective regulatory boards that ensure social contracts are upheld by members of the profession.

Four fundamental ideas make up the framework for medical ethics (Herissone-Kelly, 2009). These principles are beneficence (doing good), nonmaleficence (causing no harm), autonomy (self-regulation) and justice (fair treatment). These norms, in part, make up the basis for medical ethics of health science professions. Medical ethics associated with a profession are hard to modify as they define what the beliefs of a profession are. Standards of practice are used to help define and demonstrate the ethics associated with the group, often by inclusion in the profession's code of conduct. Those healthcare workers licensed under professional organizations are expected to abide by these codes, regardless of their own, individual moral beliefs.

When examining and defining professionalism in the health sciences, one must examine the social contract the profession has with society as well as the legal and ethical requirements the profession is held to. This requires a working knowledge of both social contract theory, the training of the specific clinician group entering into the social contracts, the needs of the public, and the market-related consequences (i.e., higher costs for care, wages, board oversight, etc.) arising from the social contract. When viewing professionalism through the social contract lens, professional (or unprofessional) behaviors are identified using societal expectations of the

professions, with each health profession safeguarding its individual values (Kurlander, J., Wynia, M, 2004). In order to safeguard these profession-specific values, professional organizations develop codes of conduct which by the seeking of licensure, individuals agree to conform to. Nonconformity results in sanctions that may be administered by the licensing agency. Sanctions may include probation, temporary or permanent suspension of licensure and fines.

Professionalism is linked to social contracts by adding stability and social dependability (Jennings, 2014). Unprofessional behavior may violate both professional ethics and the social contract held with society. If this belief is held to be true then some objectivity can be built into an otherwise subjective assessment of behaviors. For instance, some may consider tardiness as unprofessional behavior. While inconsiderate, tardiness most likely will not violate any code of ethics.

Professionalism behaviors are classified into structural and attitudinal attributes (O'Connell and Smith, 2019). Structural attributes common to professionalism are having a specialized body of knowledge and skills, unique socialization of student members, licensure/certification, professional associations, governance by peers, social prestige, vital service to society, codes of ethics, autonomy, equivalence of members and special relationships with clients. Structural attributes are tangible but there may be differences in the level of possession of structural attributes. An example of this would be hierarchy among peers.

Attitudinal attributes and behaviors are coupled based upon the linkage between them. Attitudinal attributes include use of professional organizations as a major reference, belief in service to the public, belief in self-regulation, sense of calling to the field, and autonomy (Hammer, 2000). The AACP Center for the Advancement of Pharmaceutical Education (CAPE) adds additional, pharmacy specific attitudinal and behavioral attributes: critical thinking skills,

ethical decision making, awareness, responsibility, and self-learning abilities. Examples of behavioral attributes of professionalism are the ten traits used to describe professionalism: knowledge and skills of a profession, commitment to self-improvement of skills and knowledge, service orientation, pride in the profession, covenantal relationship with the client, creativity and innovation, conscience and trustworthiness, accountability for his/her work, ethically sound decision making, and leadership (APhA, 2000, AACP 2011 & ASHP, 2007). Beliefs shape attitudes which result in behaviors (Hammer, D. 2000). What a person believes influences what a person thinks which in turn influences what a person does. While intangible, attitudes and behaviors allow room for individual opinions and levels of opinion on beliefs and actions, however, the social contract is the main driver of the appropriateness of how these attributes are implemented by individuals. Attitudinal attributes overlap structural attributes in several areas, further evidence of the complex concept of professionalism. Healthcare workers, including pharmacists and pharmacy students are held accountable to these attributes in various ways such as the oaths of a profession, codes of ethics and the unwritten social contract.

Professionalism is a system of beliefs held by an individual and guides their actions in any given situation (Grus, T., Shen-Miller, D., Lease, S., Jacobs, S., Bodner, K., Van Sickle, K., Veilleux, J., Kaslow, N., 2018). Professionalism emphasizes patient well-being, autonomy and fair treatment. Without a link between exhibited behaviors and the moral foundations of contract theory, it is impossible to distinguish behaviors that are "professional" from those that are "universally unprofessional" from those that may be professional or unprofessional, depending on specific circumstances. Moreover, it is impossible to determine those behaviors that are considered "professional", "universally unprofessional" or "possibly unprofessional, depending

on circumstances" based on explicit consideration of the social contract, or are labelled as such due to the vested interests of the business entity, or a mix of the two.

By the time a person enters their mid-twenties, values and opinions on behavior as well as actions are well-defined (Kelley et. al., 2011). Jee, Schafheutle, and Noyce (2016) found that parental influence played a significant role in how well-developed a student was in terms of being respectful and empathetic, thus supporting the findings by Kelley, Stanke, Rabi, Kuba, and Janke (2011). Further, the stronger the belief and the more a person embraces professional behaviors, the more likely they are to build relationships built on trust with the patients they serve (Tak, Henchey, Feehan & Munger, 2019). These behaviors include but are not limited to, honesty, integrity, patient centeredness and team participation.

Professionalism in the Health Sciences

There is a large component of public trust associated with healthcare workers (Eukel, H., Frenzel, J., Skoy, E., Faure, M.., 2018). This trust is implied through the social contract that patients have with healthcare workers. With this public trust comes an expectation of professional behavior. Solid relationships between healthcare workers and patients improve health outcomes. However, behaving as a health science professional is not something people are born knowing how to do. Professionalism, as expected in the health sciences, is also not automatically infused once a person is admitted to or graduates from a chosen professional program. Experiences, actions and reactions all play a part in how the health science student develops. Additionally, to expect professionalism behaviors from students, a precise definition must be available to them for reference.

Professionalism in the health sciences is an expectation of schools, the professions and the public, in part because of the level of trust the public has in its healthcare workers.

Professional organizations suggest that professionalism should encompass the full skill set of attitudes and behaviors necessary to competently practice (ACCP, 2009). The importance of professional behavior cannot be overstated. Students and healthcare workers who display unprofessional behaviors jeopardize interpersonal relationships, levels of respect, interprofessional collaboration, and possibly patient health. If unprofessional behaviors are present, it is important to correct them and better to prevent them in their entirety. Not only because of the trusting relationship that the public expects from its health care providers, but also because unprofessional behaviors may be predictors of future disciplinary action evidenced by publicly available published information regarding disciplinary actions of healthcare workers (Bodenberg, 2015).

All medical disciplines have documented evidence of unprofessional behaviors and the number of incidents appear to be increasing (Binder, 2015). This is true not only of students, but also of faculty and preceptors (Kohn, 2017). Searching the literature reveals a plethora of information on documented unprofessional behavior by members of the profession, faculty, preceptors and students in medicine (physician, physician assistant, etc.), law, the clergy, accountants, nursing, and others (Hammer, 2006).

Medical Profession

The medical profession has no single, clear definition of professionalism and is experiencing an increase in unprofessional behaviors (Binder, 2015). Members of the profession, faculty and preceptors are commonly accused of poor behavior by students. Examples included verbal abuse of students, usually by the senior member of the medical team, lack of respect shown to students, profanity, and non-cooperation with the medical team, sexual harassment, discrimination and public disrespect of a colleague, physical and verbal abuse of other staff.

Additional claims have been made regarding lack of information sharing and covering up dishonest behavior, arriving late, and arrogance toward patient (Hicks, 2005). Some practitioners felt their behavior was justified and often, these behaviors were not reported by the students who witness the interactions. Kohn (2017) found that students did not report this poor behaviors due to fear of repercussion from preceptor, decreased comradery, and disruption of team dynamics, negative impact on future opportunities and a general feeling that it wasn't a student's responsibility to report unprofessional behavior by faculty and preceptors. Somewhat comforting, Kohn did find that student reporting increased as the severity of the incidents increased. Examples of medical student poor behaviors include completing physical exams without appropriate consent, absence of striving for excellence (settling for a 70%), respect (inappropriate questions, arriving late), honor and integrity (covering up dishonest behavior) and negative attitudes (Hicks, 2005).

Medical students did have suggestions for improving the reporting of incidents. These suggestions included a streamlined reporting processes with a delayed release options to increase anonymity, increased clarification on expectations of the faculty and preceptor, training for real time solutions and, peer groups who could facilitate difficult discussions. Montrouxe (2014) found that by educating students on appropriate whistleblowing processes they were more likely to report incidences.

Dental Profession

Similar to medicine, the dental profession has its share of unprofessional issues and also no clear, single definition of professionalism (Trathen, 2009, Masella, 2007, Ashar & Ahmad, 2014). Reports by students against faculty and preceptors included inconsistent feedback, unjustified criticism, physical and verbal abuse to patients, performing unnecessary procedures,

patient safety and dignity breaches, working above scope of practice, passing blame for error onto a student. Examples of reported student dentist behaviors are academic dishonesty, completing unnecessary work on a patient or completing work without a consent, performing high-profit procedures and ignoring comprehensive care.

Nursing Profession

America's most trusted profession, nursing, is also not immune to reports of unprofessional behaviors (Gallup, 2018). Like medicine and dental, nursing has no single, clear definition of professionalism. Its faculty and preceptors have been accused of verbal abuse of students, patient safety and dignity breaches, emotional and physical/emotional abuse of patients and students, discrimination, withholding information, ignoring patient privacy, working around safety initiatives and lack of participation in ethical decision making when part of a medical team (Erdil & Korkmaz, 2009, Casey, 2005). Student nursing behaviors included academic dishonesty, inappropriate relationships with faculty, working outside scope of practice, not obtaining patient consent for procedures, and fear of reporting witnessed behaviors.

Physiotherapy Profession

Physiotherapy (PT) also has no single, clear definition of professionalism. PT faculty and preceptors have been similarly accused of verbal abuse of students, safety and dignity breaches of patients and not obtaining appropriate consent forms (Montrouxe, Rees, Endacott and Ternan, 2014). As with other student groups, PT students have been noted to work above their scope of practice and also fear speaking out about witnessed unprofessional behaviors.

Pharmacy Profession

Pharmacy has its share of troubles too. As with medicine, nursing, dental and PT, pharmacy also struggles with unprofessional behaviors in the ranks and has no single, clear

definition of professionalism. Both members of the profession, faculty, preceptors and pharmacy students have been accused of academic dishonesty, covering up errors that were not observed by others, disrespectful attitude, lack of motivation, poor appearance, confidentiality breach, and poor time management, breaches of patient safety and dignity, abuse of students, drug diversion, and drug addiction. These are just a few common unprofessional behaviors by both pharmacists and pharmacy students (Cain, Romanelli and Smith, 2012, Duke, Kennedy, McDuffie, Miller, Sheffield and Chisholm, 2005, Hammer, 2006).

All professions have similarities. Not only do all disciplines struggle to specifically define professionalism in a clear and concise manner in their relevant contexts, all have identified and documented unprofessional behaviors by members of the profession, faculty, preceptors and students. While it may initially seem comforting that pharmacy shares its struggles with defining and practicing in a professional manner, the healthcare field as a whole is taking note and ramping up work towards a solution or set of solutions so that patient care does not to suffer. Additionally, when framing the aforementioned behaviors around the four principles of biomedical ethics, can these behaviors be classified as unprofessional behavior? While these behaviors are unattractive, do they violate codes of ethics or social contracts?

Professionalism Defined in Pharmacy

In 2006 Chisholm attempted to better define professionalism in pharmacy students by adapting the work of the American Board of Internal Medicine (ABIM) to fit the field pharmacy. Of note, the work of the ABIM had strong support from the pharmacy academy. The ABIM had previously identified three key areas that make up professionalism. These three areas included structural traits deemed necessary to excel in practice, maintaining the welfare of patients, and being responsive to society's needs. These three traits were further expanded to incorporate six

key areas commonly known as the six tenets of professionalism. These attitudinal tenets include altruism, accountability to patients, excellence, duty to serve patients, honor and integrity, and respect for others. Chisholm, et. al. then adapted the tenets to the profession of pharmacy. A study by Duke, et. al. (2005) indicated that students, in general, agree with these tenets. In 2009, the ACCP adopted the six tenets of professionalism for pharmacy students.

Altruism can be defined as the unmotivated, unselfish care for patients (Chisholm, 2006). Robins, Braddock and Fryer-Edwards hypothesize that altruism is the very essence of professionalism (2002). Translated into pharmacy practice, it means taking care of all patients equally; not jeopardizing or delivering lesser quality of care based on the patient. An example of altruism is providing the same level of care to all patients, regardless of their ability to pay for services. Altruism means taking care of the patient above all else.

Accountability, according to Chisholm is implied by fulfilling the covenant held with patients. Translated into pharmacy practice, it means that pharmacists are accountable to providing quality care to patients. An example of accountability is providing appropriate quality patient care every day.

Excellence is defined by Chisholm as being demonstrated by evidence of lifelong learning, exceeding expectations and producing quality work. Translated into pharmacy practice, it means that pharmacists strive for perfection in action.

Duty is a commitment to serve at any time (Chisholm, 2006). Translated into pharmacy practice, it means that duty is the willing acceptance of the responsibilities of one's chosen profession, even when it is inconvenient. An example of duty is recognizing the responsibility to report an error that no one else witnessed being made.

Chisholm defines honor and integrity as being fair, truthful, being straight forward and meeting commitments. Translated into pharmacy practice, it means having a reputation for acting according to a well-defined and transparent system of ethics.

Respect for others, according to Chisholm means respecting other professions, patients and their family members. Translated into pharmacy practice, it means taking time to adequately address a patient's healthcare needs.

Professionalism in Health Science Education

Incorporating professionalism into health science education is difficult. Professionalism is a complex concept that is both structural and attitudinal in nature (Hammer, D., 2000, O'Connell and Smith, 2019). Students, faculty and preceptors in many health science fields find it difficult to define professionalism (Schafheutle, Hassell, Ashcroft, Hall & Harrison, 2011). Both instructors and students agree that professionalism should encompass interactions with other healthcare professionals (interprofessional), the profession as a whole and the public. Examples of good and bad professionalism have been well-documented in the literature by Chisholm, Duke, Hammer and others however, a clear and concise definition of professionalism in the health sciences is elusive. Further complicating the issue is the subjective nature of the definitions currently available in the literature. Interpretation of what is, or is not, professional behavior may vary based upon criterion being used (Tanzer & Dintzner, 2017).

Student Entitlement and Consumerism

In 2014, Holdford published research exploring the idea that pharmacy students are no longer a product of their respective programs, but rather, are consumers of their respective programs. This way of thinking views pharmacy education as a customer service-centered

enterprise rather than product-driven enterprise. Holdford's research explores student entitlement and consumerism.

Student entitlement is often stated in the literature as a reason for unprofessional behavior (Holdford, 2014). Entitled students make up a small but vocal percentage of the student body. These students often feel that receiving a degree is a right, not a privilege, and educators are responsible for student learning. Entitled students often blame instructors for poor scores and feel they should receive good grades regardless of the amount of effort and may resort to argument or aggression to receive more points if they feel their needs are not being met (Cain, Romanelli & Smith, 2012). While it is true that educators are responsible for providing quality classroom content, educators are not responsible for whether a student studies, learns and passes assessments. And although pharmacy students, by definition of the word, are adult learners, they are not content experts. While student effort in the classroom is appreciated, it is not enough to demonstrate mastery of course content. Rewarding these students with A's and B's for little to no effort is grade inflation which brings in to question the rigor of the education. Rigorous education in the health sciences is necessary so that students are prepared licensure exams and practice. Entitled students place themselves, instead of the patient at the center of patient care process. Entitled students hold educators hostage by wielding student rating of instruction scores (SROIs) as a weapon rather than a development tool. Administrators who rely heavily on SROI scores for promotion, tenure and compensation tacitly encourage entitled behavior by students by disempowering faculty to hold students accountable.

Associated with entitlement is the idea of consumerism (Holdford, 2014). Consumerism by students happens when a student pays tuition for a course and therefor feels he or she is 'owed' success (Holdford, 2014, Keener, 2019). Consumerism increased in the 1980s, partly due

to changing demographics in higher education (Zlatic, T., 2014, Keener, 2019). In the face of these changes and the tightening of budgetary restrictions, many institutions turned to hiring institutional administrators with business backgrounds. The reason for this was by focusing on the 'business' of higher education, there would be increased competition to improve educational returns on resources. A business-oriented administrator sees students as customers which fosters the belief to students that they are indeed customers to be served instead of a product under development. This is a fundamental change from the traditional expectation of higher education.

Maintaining consumeristic students in a program who should not be maintained due to poor academic performance or lack of professionalism not only has the potential to negatively impact future patients but will also affect the school by graduating unemployable students (Cain, Romanelli and Smith, 2012). On time graduation rates and first time NAPLEX pass rates are just two examples of how pharmacy schools could be negatively affected. Both of these items are tracked by the ACPE as part of the accreditation process. Both entitlement and consumerism by students indicate that students may not fully understand (or care) what it means to be healthcare provider.

Entitlement and consumerism have been associated with Generation Y students, the generation of students currently enrolled in colleges and universities (Keener, 2019). Generation Y students, also known as millennials, were born from 1982-2002. Generation Y core traits include a sense of confidence, a desire to be team-oriented, the urge to be rule-abiding to the rules they set for themselves, feeling special, the motivation to be high achieving, the tendency to feel pressured and the need to be sheltered and kept safe. Examples include being given participation trophies (special), class information to be enforced must be in the syllabus (sheltered), negotiating acceptable behavior (confident), learning-living centers (team-oriented),

these students don't mind being held accountable if accountability can be achieved through good behavior, not necessarily effort (achieving) and the expectation of success if a pre-defined path is available and they stick to it (pressured). In general, Generation Y students are working more but spending less time studying. One specific area where Generation Y traits run into trouble is when these students encounter non-Generation Y faculty and employers. This belief is supported in practice where role expectations by older, more experienced members of the profession and preceptors are different from role expectations of newer graduates which often results in friction (Chalmers, Adler, Haddad, Hoffman, Johnson & Woodward, 1995).

Declining Professionalism

One theory for the decline in professionalism behaviors is that students today do not fully comprehend what it means to display professionalism and students have differing opinions on what constitutes professionalism than do faculty and preceptors (Alsharif, 2017). This is to be expected for a variety of reasons. The profession of pharmacy itself cannot come to consensus on a working definition of professionalism. Thompson et. al (2008) interviewed four groups about the importance of professionalism, and where it was addressed and modelled. The groups interviewed were students, faculty, administrators and preceptors. All groups mentioned competency and responsibility as markers of professionalism. Attitude and ethical standards as markers of professionalism were mentioned by all but administrators. Students and faculty mentioned appearance as a marker of professionalism, but students voiced the opinion that dress and appearance were not markers of true professionalism. The differences found among these groups are further evidence of the difficulty in defining professionalism. Additionally, the behaviors typically thought of as unprofessional in nature are not rooted in four principles of bioethics; beneficence, maleficence, autonomy and justice.

Recently, Tak, et. al. (2019) found a link between satisfaction with education and degree of professionalism displayed. Specifically, students who were more satisfied with their education were more likely to display a greater level of professionalism than those who were less satisfied or unsatisfied with their education. Tak's findings also took levels of stress into account and found that while there is a connection, stress does not outweigh satisfaction for a predictor of professionalism.

While students may not fully understand or lack self-awareness as to why professionalism is important in pharmacy and may disagree with educators as to what professionalism looks like in pharmacy practice, they do recognize that levels of professionalism decline during the middle years of a pharmacy program, before rebounding during the final years (Poirier & Gupchup, 2010). This may be due to efforts at improving professionalism early in a program that was not longitudinal. The level of professionalism then rebounds during the final year of pharmacy practice experiences when students are completely immersed in patient care activities with real patients in real situations.

Instilling Professionalism

Currently, some common methods for instilling the ideals of professionalism at schools of pharmacy are distribution of student handbooks, codes of conduct, dress code policies, offices of professional development for students and ceremonial activities (Sylvia, 2004). While notable activities, opinions are mixed between members of the profession, faculty, preceptors and students as to the importance of these activities. These activities are superficial and may not address the underlying principles of medical ethics and even with these measures, professionalism issues are still common in pharmacy schools.

Professional socialization and role-modelling

An additional effort at improving knowledge that has seen recent attention is an emphasis on professionalism socialization, often referred to as the 'hidden curricula' because it is not formally taught, but rather is modelled of which role playing and role modelling play a significant part in the development of students to professionals (Alsharif, 2017, Hammer, 2006). Both faculty and preceptor teaching behavior, role playing, and role modelling demonstrate a clear picture of how a professional behaves (Sylvia, 2004). Role playing or role modelling may help to solidify what faculty and preceptor professionalism expectations are by providing a visual example. Interestingly, students, in general, see value in good role models but cite that behaviors modelled by faculty and preceptors are not always the same as the behaviors expected of students (Thompson, et. al., 2008). Students observe faculty and preceptors in whatever setting they are encountered. Students will observe whether the preceptor practices professionally, how the preceptor treats fellow coworkers, how the preceptor interacts with students-does the preceptor make the student feel valued or in the way?

When considering the belief that social values in society are decreasing, role playing and role modeling will play an ever increasing role in teaching student pharmacists what it means, and what it looks like, to practice pharmacy as a professional with professional attitudes and actions (Duke, 2006, Hammer, 2006; Sylvia, 2004). Unprofessional behavior by faculty and preceptor role-models leads to inconsistent professional socialization which sends mixed messages to students (ASHP, 2009). It is essential that educators who employ role playing or role modelling be consistent with their own behavior so as not be appear hypocritical or these inconsistent behaviors may exacerbate the problem. This is especially important when

considering that the pharmacy profession is expected to recruit and nurture new practitioners to the ideals and mission of the profession.

Although faculty and preceptors may feel that role-modeling is not their responsibility (Thompson, Farmer, Beal, Evans, Melchert, Ross & Schmoll, 2008) they are ideal candidates to engage in professionalism socialization. Faculty and preceptors work closely with students throughout the program and can role play and role model through lecture, assessment, advising and student organization participation. Preceptors work with students in real life situations where the safety net of the academic setting is absent, allowing the student to choose how to respond and behave. Both faculty and preceptors are ideal populations and practice in the ideal setting to role play and role model for students and participation in these activities is important for student development.

Professionalism socialization increases student awareness of expected behaviors as they learn what roles, responsibilities and performance expectations they will be held to as both a pharmacy student and a pharmacist. This includes the development of traits such as caring, empathy, setting patient needs above one's own, integrity and so forth. Some amount of professionalism socialization will occur automatically as students matriculate through a pharmacy program but if no formal plan is in place, then there is no guarantee that curricular outcomes related to professionalism will be met by all students (Chalmers, et. al, 1995). Whether this professionalism socialization will be positive or negative depends on student experiences and encounters with faculty and preceptors. For professionalism socialization to be successful, a formal plan applied longitudinally across the curriculum is necessary and students must have solid, consistent, professional role models (Alsharif, 2017, Holdford, 2014, Schafheutle, et. al, 2012). Students must be continually exposed to professionalism activities at the start of the

pharmacy program and continue throughout all years of the program, including practice experiences. This will require preceptors to have some amount of training on how to appropriately role play and role model for students and on how to coach them through difficult situations. Preceptors need not worry about being professionally perfect at all times, but should be willing to admit when a breach in professionalism occurs and be aware of their own professional actions (Hammer, 2006).

Examples of poor role modelling by faculty and preceptors are student abuses, breaches of patient safety, disrespectful actions toward students by faculty, disrespectful actions to ward students or patients by preceptors or other healthcare workers. Also prevalent is the adage 'do as I say, not as I do' (Monrouxe, et. al., 2014). Preceptors who tell students to do one thing while they themselves provide poor role modelling and send mixed messages for expected behaviors to students.

Development of a professional identity

Another important aspect of professionalism development is developing a professional identity. While included in the professionalism socialization process, the development of a professional identity is different from professionalism socialization and is specific to the individual. Professional identity is the development of an individual's self-awareness, morals, and core values (Tak, et. al., 2019, Mylrea, M., Gupta, T., & Glass, B, 2015). Activities that lead to professional identity are included in all areas of pharmacy education, both didactic, experiential and interprofessional, work experiences and student organizations. Tak, et. al. found that alignment between three specific items factor into the development of a strong professional identity: education about professionalism, working environment and the professions social identity. Also, closely associated with this development are student attitudes and views of

community, patient centeredness, team participation, and a clear expectation of the role in patient care teams. Role playing and role modeling by faculty and preceptors greatly affects a student's professional identity.

Additional techniques for developing professionalism

There are a variety of additional techniques that faculty and preceptors may employ to help students improve professionalism (Hammer, 2006). Both faculty and preceptors, must clearly state expectations early on in their respective courses to avoid misunderstanding of expectations by students (Hammer, 2006). By stating explicit expectations and explaining why the expectations are relevant and important, students will know exactly what is expected of them, academically, in the classroom and in practice while on rotation. Providing documentation of policies that address professionalism and allow for discussion regarding how the policies apply to pharmacy, pharmacists, and student pharmacists. While expectations should be set high, educators must be aware that each student is an individual who may require additional guidance to understand or meet expectations.

Setting student-specific and achievable high standards for students is another strategy to allow for student buy-in of the concept. Treating students respectfully and spending time with them are also a forms of role-modeling that may increase professional behavior. Students will learn that their work is appreciated and be more apt to work hard.

Equally important is giving frequent feedback so that students are aware of what they are doing well on and what they need to improve upon. Unprofessional behavior should be addressed early and discussions centering on expectations and alternative behaviors (role playing) that could have been employed (Binder, 2015). Directed self-assessment by the student

of the action to be discussed will help start a discussion around professionalism and expected behaviors.

One common strategy is student self-definition and self-assessment of professionalism of their level of professionalism (Chisholm-Burns, Cobb, Duke & Kennedy, 2006). Faculty and preceptors provide feedback to students on their definition as well as their self-assessment results is important and should be continued throughout the time spent with the student.

Another strategy is employing dress codes in pharmacy. Students in experiential settings are required to dress in a professional manner for all experiential activities. NDSU-SOP's dress code requires business casual dress (or more formal), name tags, natural hair colors (although hair may be a different color, it must be a natural color such as blonde, brown, black, etc.), well-groomed facial hair, no strong scents and no acrylic nails. Shoes must cover the entire foot and of a material that is not a fabric. Some type of stocking must be worn at all times. While these may seem trivial and overly restrictive to a new student or non-pharmacy person, these requirements are rooted in safety (Undem, 2020). For example, acrylic nails have been found to harbor bacteria which can be detrimental to sterility requirements in the IV room of a hospital.

Pharmacy and the social contract

Pharmacy is one profession that has a social contract. Current pharmacy literature addressing professionalism addresses attributes deemed necessary for the profession but does not link these attributes to the social contract that the profession holds with the public. As a result, the pharmacists frequently view specific behaviors as "professional" or "unprofessional" without any links to ethical theory or social contract theory. Moreover, as a clinical practice is a business enterprise, the business also has vested interests to be protected and a culture and/or public image it wishes to project (Veblen, T., 1912). Historically, pharmacists were the proprietors of the

business, and so the link between the social contract and the business entity was evident. Today, pharmacists are employees in large, often publicly controlled, organizations and have little control over the business entity (Friesner, 2009). Thus what is expected of the pharmacist as an employee is often disjointed from the expectations arising from the social contract.

Common examples used to foster the idea of the social contract and that happen early in programs is the White Coat ceremony where students first proclaim their willingness to take on the service aspects of the pharmacy profession, pharmacy practice labs where students learn the mechanics of being a pharmacist, pharmacy practices experiences where didactic learning is put into practice, codes of conduct and service learning. Research has shown that students feel less emphasis should be placed on symbolic activities such as White Coat Ceremonies. Conversely, administrators feel strongly regarding inclusion of these activities to enhance professionalism (Thompson, et. al., 2008).

Co-curriculum

Co-curricular programs are a newer responsibility put forth by ACPE in the last set of standards updates in 2016. Co-curriculum activities are meant to foster professional development longitudinally across pharmacy programs. Co-curriculums may also help students to develop professional identities (Tak, et. al., 2019). Pharmacy schools can create and structure their co-curriculums in any manner they choose. At NDSU the School of Pharmacy Co-Curriculum is structured by class year. First year co-curricular requirements center on self-awareness and professionalism and include activities such as the White Coat Ceremony, P1 Pharmacy Student-M1 Medical Student Match, a leadership seminar and other various electives. The P1M1 student match pairs a first-year pharmacy student and a first-year medical student. These students are paired for the duration of their education. The intent is to foster interprofessional relationships

based on professional roles that will positively impact patient care. Montrouxe et. al. (2014) has suggested that interprofessional learning activities may be beneficial in helping students understand how to operationalize professionalism.

The second-year co-curricular requirements center on team and teamwork-team readiness and includes activities such as attending a career fair, attending interprofessional grand rounds, P1M1, now P2M2 longitudinal activities and other various co-curricular electives. The third and final year of co-curriculum at NDSU is centered on direct patient care practice essentials – practice readiness. The third-year co-curriculum includes activities such as interprofessional simulations, P1M1, now P3M3 longitudinal activities, cultural competency training and other various co-curricular electives. Fourth year students completing practice experiences are not required to complete co-curricular requirements but are expected to practice in such a way that incorporates what they have learned during their own co-curriculum.

The admissions process

Pharmacy schools also use the admissions process to screen for indicators of unprofessional students. Accreditation standards require students to complete interviews as a portion of the admissions process. In 2004, Sylvia surveyed then existing schools of pharmacy seeking information on how schools were utilizing admissions processes to identify professional and unprofessional behaviors. Results were somewhat mixed. Most schools had a process to screen for professionalism in candidates but less than 25% of responding schools tracked the effectiveness of their efforts. At NDSU, the School of Pharmacy uses a multi-faceted interview process that combines health reasoning with critical thinking and problem solving to try to root out students who display unprofessional behaviors in the high stakes atmosphere of admissions. The NDSU School of Pharmacy has not tracked the effectiveness of this process.

Professional organizations

Finally, the influence of professional organizations should not go unnoticed. Pharmacy is a profession that enjoys a certain amount of autonomy. Pharmacy organizations can promote professionalism expectations of the profession to both students and pharmacists. As evidenced by the various white papers published, these organizations may not have a clear and concise definition of professionalism, they do have clearly defined expectations for the behaviors of the profession. These organizations have made it known through publications that among other things, active professional organization membership, volunteerism, and community service are highly valued and expected by the profession (ASHP, 2008, APhA, 1994, ACCP, 2009).

Pharmacy schools may teach on various aspects of professionalism and tend to have the general belief that these activities must start early in the curriculum and continue longitudinally, with repeated exposure, both didactically and experientially (Schafheutle, Hassell, Ashcroft, Hall & Harrison, 2012; Sylvia, 2004). Inevitably, students will behave unprofessionally. When this happens, early intervention is critical (Binder, 2015). Many schools have established professionalism remediation processes when students behave unprofessionally while on rotations (Bodenberg, 2015, Rougas, 2015 & Binder, 2015). These remedial activities are meant to draw awareness to appropriate behavior and may include self-reflections, ethics papers, action plans, presentations and service learning. Remediation plans commonly include additional assignments for students tailored toward their professionalism infractions. Hicks (2005) puts a more positive spin on the remediation process by having all remedial students keep a daily journal of desirable actions, frequent mentor/mentee meetings and the employment of behavior contracts. When a relapse occurs, the journal is reviewed for consistency or lack of consistency to assist in determining the cause of or reason for the relapse.

Measurement and Assessment of Professionalism in the Health Sciences

The duty of improving professional behavior is important in and of itself and for at least three reasons. First and foremost is in the interest of the patient. Healthcare models continually evolve over time. As these changes to healthcare delivery occur the perception is that healthcare provider standards of care are declining (ASHP, 2007). As stated before, unprofessional behavior can affect health outcomes in a negative manner. If healthcare workers are to do no harm to their patients, avoiding unprofessional activities or attitudes.

The second, which is equally as important as the first because the two reasons have the potential to be at least indirectly if not directly linked. Poor professionalism behaviors as a student are predictors of additional poor professionalism behaviors as a practicing professional and even disciplinary action (Teherani, 2005 & Bodenberg, 2015). Additionally, experts agree that in general, students who struggle with professionalism issues while in school will have difficulty, at some point, with professionalism issues as a pharmacist (Alsharif, 2017). This in turn may lead to decreased patient outcomes and trust in the profession of pharmacy.

Finally, the mental well-being that comes from practicing as a part of a patient care team must be considered. Kohn (2017) details that students became emotional, using either tears, anger or self-conscience laughter as a coping mechanism when discussing professionalism breaches by the faculty or preceptor. It is reasonable to assume that the students of all disciplines would feel similarly upset. This emotional demonstration indicates that students do recognize at least some unprofessional behavior when the happen.

There have been ongoing efforts made to define, promote and assess professionalism in pharmacy. But, because professionalism is difficult to define as well as assess, there is a shortage of documented, reliable assessment instruments (Chisholm, et. al, Bodenberg, et. al, Duke, et.

al.). Additionally, few schools assess the effectiveness of their professionalism assessments or development processes. Instruments and processes aimed at identifying and developing professionalism have been applied to the recruitment, admissions, didactic and experiential components of pharmacy education (Sylvia, 2004). Sylvia also found that students expect schools of pharmacy to teach them how to become professionals and do expect schools of pharmacy to deliver processes aimed at promoting professionalism, yet there is clearly a disconnect between what students expect, what schools teach or demonstrate and how some students behave. The belief that schools should teach on professionalism is also supported by a study by Thompson, et. al. (2008) where students stated a need for more interactions as well as applications of professionalism.

In 2000, Hammer et. al. created an instrument to assess behavioral professionalism, the Behavioral Professionalism Assessment (BPA) instrument. The purpose of the instrument was to provide a more comprehensive definition of professionalism and to assess student understanding of professionalism. The instrument was tested by multiple preceptors and experiential coordinators from multiple pharmacy schools. Unlike other instruments that used literary definitions as the basis on the study, this instrument focused on occupational attitudes and behaviors. The BPA instrument included 25 items used to assess responsibility, interpersonal/social skills, communication skills and appearance. The BPA was not mapped to the six tenets of professionalism, although there is some overlap with the attitudes and behaviors. The purpose of this study was to develop and test the instrument, not to compare cohorts of students, thus no differences between cohorts was examined but differences in students scores were noted and were found to be based upon preceptor characteristics, not on the students themselves.

A survey was created to assess student perceptions of the University of Georgia curricular professionalism objectives (Duke, L., Kennedy, W., McDuffie, C., Miller, M., Sheffield, M., and Chisholm, M., 2005). These objectives were framed around the six tenets of professionalism and student perceptions of peer actions in terms of professionalism. This study revealed several things. In general students agreed with the University of Georgia's curricular professionalism objectives and agreed on the importance of the six tenets of professionalism. Agreement rates regarding the professionalism statements tended to drop over each of the first three years and then sharply rebounded during the fourth and final year of pharmacy school. These findings were attributed to the ceiling effect of self-assessment followed by a time when the rigor and expectation of pharmacy school conflicted with the student's initial ideals regarding patient care. Agreement rates rebounded during practice experiences, when students were actively engaged in true patient care experiences. Students may believe that second year coursework does not prepare them to meet patient-centered outcomes leading to a feeling of cynicism. Once practice experiences begin, attitudes improve.

In the Duke study, there were seven statements that yielded statistically significant gender differences. Items where male respondents agreed more than female respondents addressed communication, regard for persons in authority and timely manner in which pharmaceutical care responsibilities were performed. Items where female respondents agreed more than male respondents addressed time management, professional attire and grooming, the maintenance of required records, dependability, diversity and service. Additionally, female students were more likely to feel that the school of pharmacy should teach professionalism than male students. In general, results indicate that students, overall, had a high level of agreement with the universities statements regarding professionalism. Differences among the study groups

included receiving negative feedback with a positive attitude (first year students indicated a higher level of agreement than fourth year students, possibly due to first year student realizations that they have a lot to learn.) Fourth-year students, who practice with other healthcare workers, were more likely to agree that the ability to formulate an evaluation of a peer's performance is a marker of professionalism. The same was found when identifying areas where the student's motivation and values were different from those of a patient. Students earlier in their academic journeys may have no context with which to fully understand these objectives. In general, the level of agreement to survey statements declined over the second and third years and then rebounded during the end of the third year and during the fourth year. The findings also indicated that all class cohorts had lesser levels of agreement when considering their classmate's level of professionalism. This may be due to assessing classmates more rigidly than themselves or overestimating their own level of professionalism.

In 2006 Chisholm et. al. created an assessment instrument that students could self-assess their own level of professionalism. The 18-item survey was mapped to the six tenets of professionalism and was administered to first year pharmacy students and new graduates. No differences were found between the two groups of students. It is possible that the first-year students rated themselves considerably higher than was actually true, resulting in a decrease in the self-assessment of perceptions of professionalism perceptions after the first year that then rebounded after completion of the fourth and final year in the program.

In 2010, using the Chisholm-Burns instrument across first, second, third and year-end fourth year student cohorts, Poirier and Gupchup found significant differences between the first- and fourth-year student cohorts in the areas of altruism, accountability, honor and integrity. This may be because students enter pharmacy programs with a specific set of ideals or are developed

by instructors that decreases as students begin to experience real life practice situations Chalmers et. al., 1995). No significant differences were noted in the areas of excellence, respect for others and duty. This may be due to the effectiveness of the admissions process which screens for these attributes either through essays or the interview process itself. While no differences were noted between the first and second years, important concepts were put into place through learning activities so that in general there was an overall increase in professionalism scores across all cohorts as students progressed through the program. These findings indicate that students had longitudinally developed professionally across the curriculum. These findings were contrary to the Chisholm data of 2006 where no differences were noted between first year students and new graduates.

In 2011, Kelley et. al. created and cross-validated a 33-item Professionalism Assessment Tool (PAT). Modelled on the Physicianship Evaluation Form, a form used by medical schools to document professionalism behaviors, the PAT assesses adaptability, relationships with others, reliability, responsibility, self-improvement, and upholding principles. A citizenship and engagement domain was added based upon information published in the APhA-ASP/AACP white paper on student professionalism. The PAT was mapped to the Hammer instrument, Chisholm instrument and the white paper by APhA on student professionalism. The intent was to minimize student ceiling effect with self-assessment. Like the BPA creation, data from the PAT was not looked at across specific cohorts, however, in 2018 at NDSU, Eukel et. al. did examine data from first, second- and third-year students. The PAT was administered twice during the first and second year and administered three times during the third year. These findings indicate that students show longitudinal improvement in the five domains assessed by the PAT across most

demographics. Some differences were noted in older students and students involved in two or more student organizations.

These assessments instruments each look at various aspects of professionalism. The instruments have one commonality. They are not widely used (Rutter, P., Duncan, G., 2010). In order to truly understand how useful they are, additional student populations at different schools need to be studied. When used, these survey instruments have yielded mixed results, which has led to some changes as to how some schools teach and model professionalism to students, however unprofessional behavior continues to persist and even increase (Binder, 2015). One reason for this may be barriers to fully implementing processes or barriers to realizing full results.

One obvious barrier to improving professionalism is the lack of a clear consensus for a definition of professionalism in pharmacy (Bryden, 2010). Bryden further clarifies by stating that that it is easier to define by what professionalism isn't than what it is. To assess a student on something that has no clear definition or framework for students is difficult at best and frankly, unfair to students. If a student does not know what professionalism is and has never been taught what professionalism is then the student simply cannot know what professionalism is. Further complicating this issue are the differences in opinion and the subjectivity that comes with the various descriptors of professionalism. Students, faculty and preceptors have differing options. For example, faculty and preceptors recognize professional dress as a marker of professionalism, but not all students agree that dress is an indicator of level of professionalism (Thompson, et. al., 2008).

Institutions of higher learning as well as those entities providing patient care may also inadvertently prevent improvements in professionalism behaviors when administrators fail to

recognize exemplary professional behaviors or fail to confront unprofessional behaviors (Bryden, 2010, Cain et. al., 2017). This may be due to fear of confrontation or the belief that confronting a colleague or subordinate may be perceived as undermining authority. This lack of action does not empower faculty and preceptors to confront colleagues or students about unprofessional behavior and the result is not only an unspoken approval of the behavior but also a decrease in morale.

Additionally, faculty and preceptors may be uncomfortable with direct feedback to students and be unwilling to address professionalism issues (Tanzer & Dintzner, 2017, Kelley, et. al., 2011, Ginsburg, S., Regehr, G., Hatala, R., McNaughton, N., Frohna, A., Hodges, B., Lingard, L., Stern. D., 2000). Thus, unprofessionally behaving students tend to slide by without notice. Even faculty who are willing to call out bad behavior may not report behaviors for lack of knowledge of processes, fear of retaliation, or litigation and while it may be true that direct feedback can be uncomfortable, both faculty and preceptors are obligated by the positions they hold to give feedback so that students know how they are performing. To withhold this information, for any reason, is unprofessional behavior in and of itself as well as condemning of a profession to mediocrity, or worse, a profession where anything is appropriate. Faculty and preceptors may feel that they lack the time or knowledge of processes to affectively confront unprofessional behavior (Rougas, 2015). Going further, Hicks (2005) claims that preceptors feel they are responsible for student knowledge, not behaviors. Granted, Hicks writes in terms of medical faculty and preceptors, but if pharmacy faculty and preceptors feel similarly, this opinion is counter to the charge by ASHP that pharmacy practice mentor professionalism to students. Additionally, Hicks details that faculty and preceptor lack formal training to teach and assess professionalism. While this may be true, especially considering the lack of definition, by

doing nothing to address professionalism then professionalism socialization is left to chance which may lead to unintended, lifelong outcomes and consequences.

Practice sites may be a barrier to developing professionalism in students. As discussed, the development of professionalism comes from a combination of steps (Hammer, 2006). Facilities, work environment, available services and employees all come together to create the professional image of pharmacy. The image projected by these aspects is noticed by students as well as patients.

Students themselves, may also be a barrier to instilling professional values and promoting professional behaviors. To increase student engagement, students may be involved in evaluative processes and have membership on college committees. These activities put students working with faculty members in a collaborative nature. These activities may take away or decrease the student perception of faculty authority as well as give students the idea that their opinions and feedback outweigh those of the faculty expert (Cain, et. al., 2017). Also, the subjective nature of survey instruments used to self-assess student professionalism may yield over-inflated results (Kelly, et. al., 2011). In 2009, the ACCP called on students to influence and create the culture in their respective schools. Specifically, cultures that will foster professionalism development. Incorporating the six tenets into student life may help students develop the life-long professionalism attitudes and behaviors the profession expects. While this commendable, educational materials to accomplish this must be available to students and student organization leaders.

Finally, the six tenets of professionalism have inherent barriers to them as well. Altruism, accountability, duty, excellence, honor and integrity and respect for others are words that are difficult to clearly define and model. Finding balance between learning and ‘using’ patients for

learning purposes may be difficult for students. Lack of proper balance may conflict with altruism (Robins, et. al, 2002). Accountability is required at all levels or patient care. Inappropriate accountability in role-modeling by faculty or preceptors will foster a lack of accountability in students. Excellence is a purposeful action to go above and beyond expected actions and is hard to quantify. Again, inappropriate accountability for attaining excellence will foster a lack of excellence. For example, a 70% is great! With this mentality students may not be motivated to strive for excellence. Duty is the choice to accept a service-oriented role that puts healthcare 'on call' at times that may conflict with school or family obligations making it difficult to shoulder 'duty' all of the time and may foster resentment to the profession. Honor and integrity is an extremely broad concept that includes being truthful, keeping commitments, awareness of conflicts of interest and behaving appropriately. Similar to the duty tenet, honor and integrity may be difficult to maintain all of the time. Respect for others, if not role-modelled appropriately can lead to a culture and climate of disrespect and unprofessional behaviors among the health care team.

If the profession of pharmacy were to create a universally agreed upon definition for professionalism, it may still be unlikely to change professionalism behaviors. Change is hard. Hundreds of books and articles have been written about implementing change or being a change agent. All state in some fashion that making long lasting change is difficult. Pettinger (1998-personal correspondence) once said that lasting change only comes from life changing events. Life changing events in pharmacy are most likely to come from negative encounters such as patient harm or termination from the pharmacy program.

Regardless of the reasons for the lack of professionalism, one thing is certain. Faculty, preceptors, and students need to adapt their respective focus' to place the patient back at the

center of education (Holdford, 2014). The privilege of pharmacy school is to learn how to better serve patients in a competent manner. With unprofessional behaviors still occurring, additional efforts need to be made to instruct students appropriately on what is expected of them both academically and professionally.

Justification for a Different Approach

Aligning medical ethics with unprofessional actions as detailed in the literature is a challenge. Applying the taxonomy of the four principles of medical ethics (autonomy, justice, beneficence, nonmaleficence) to what the literature classifies as unprofessional behaviors is a difficult task that results in direct links to autonomy (covering up of errors, academic misconduct, working around safety measures and passing blame) and justice (patient safety issues, confidentiality, lack of consent forms obtained and discrimination). Other commonly cited unprofessional behaviors link to none of the four principles (verbal abuse, lack of respect, inconsistent feedback, dignity breaches, laziness, poor time management, unkempt appearance). While these actions are inconsiderate, they are likely not going to cause patient harm. Should they be considered unprofessional behavior or merely an irritation to the person reporting the behavior? That is a study that is beyond the scope of this paper.

When integrating assessment instruments, student beliefs, preceptor beliefs and the theory behind medical ethics, it's clear that these do not integrate well. Despite all of these resources, the perception of unprofessional behavior by pharmacy students still persists. Therefor a different approach is warranted.

Working within the construct of what is documented in literature as unprofessional behaviors is one place to start in order to improve student and preceptor understanding of professionalism and the associated behaviors. By understanding the profession's six tenets of

professionalism, students may begin to better understand what is expected of them by the profession of pharmacy. In order to take this small step forward, students must have an understanding of these tenets and how they apply to pharmacy students.

Bloom's Taxonomy of Learning is a learning model where the lowest level is 'remembering' and the highest level is 'creating', one must be able to demonstrate competence through all previous levels in order to be able to effectively create.

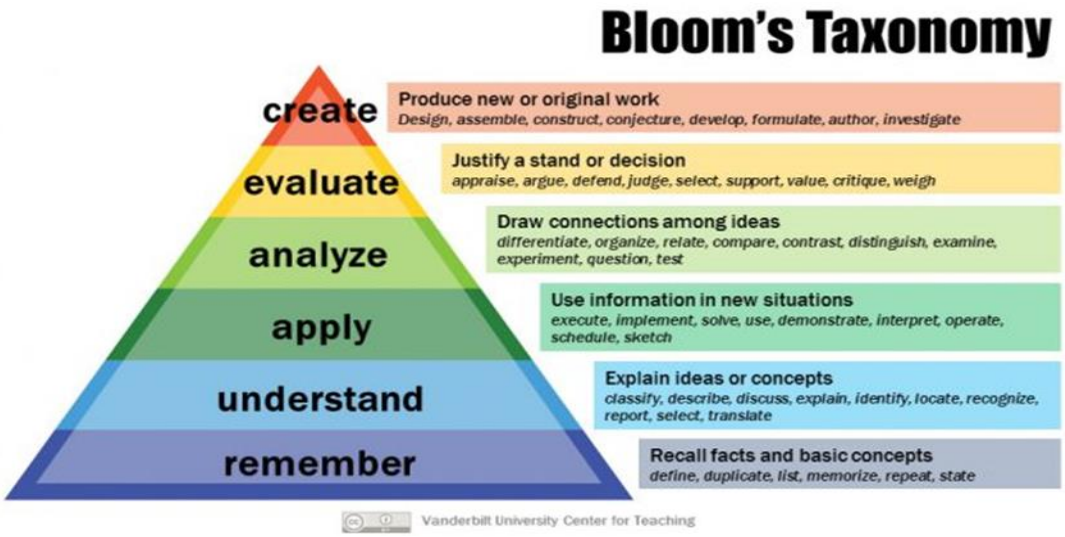

Figure 1. Bloom's taxonomy.

For the concept of professionalism, as described in modern literature, to be applied, it must first be remembered and understood. To remember professionalism, a student must be able to recognize, identify and recall what professionalism is. To understand professionalism, a student must be able to recognize, identify, recall, interpret, illustrate, classify, summarize, infer, compare and explain what professionalism is. To apply professionalism, a student must be able to recognize, identify, recall, interpret, illustrate, classify, summarize, infer, compare, explain, execute and implement professionalism. Can pharmacy students explain all of these in terms of professionalism?

Regardless of which activities or instruments a school uses to assess professionalism in its students, when considering Blooms Taxonomy of Learning, the first step in improving professional behaviors in pharmacy students must be to determine whether students both know and understand the components that are commonly believed to make up professionalism. Students cannot apply what they do not remember or understand. When reviewing the literature available on professionalism in pharmacy students, it does appear possible that students today do not know or understand and therefore cannot apply professionalism as well as they think they can or as faculty and preceptors feel they should.

When considering the traits of Generation Y students; if these students do generally tend to follow the rules as long as they are enforced and explained, it is possible that by explaining professionalism as described in the literature and related examples, there may an improvement in professional behaviors by pharmacy students. This study will seek to improve student understanding of the six tenets of professionalism and how they relate to pharmacy by first assessing, via a pretest, student understanding of the six tenets. Resources were then provided to students. These resources will gave further definition of the six tenets, as well as pharmacy-specific examples surrounding the tenets. A posttest was administered to determine if understanding improved with resources being made available.

CHAPTER 3: METHODS

The purpose of this study is to examine whether students understand the meaning of professionalism in the context of the pharmacy profession as described by the six tenets of professionalism for pharmacy students (Chisholm, et. al., 2006). This Institutional Review Board-approved study (See Appendix A) involved implementing and assessing a method of improving knowledge of professionalism behaviors by third year pharmacy students prior to the beginning of clinical rotations and fourth year pharmacy students who are halfway through the final year of rotations. In order to assess student's knowledge resulting from instruction, students were given a pretest and posttest survey to assess knowledge of the six tenets of professionalism (See Appendix C). The survey consisted of six multiple choice questions related to each of the six tenets of professionalism and six application-based studies.

Participants

For this study, data was collected in two phases, with the first including subject matter experts and second involving all students from the same cohort of third and fourth year pharmacy students enrolled in fall semester pharmacy classes at NDSU during the 2020-2021 academic year. All participants were asked to provide their informed consent (see Appendix D).

Phase 1

The first sample consisted of eight subject matter experts, all of whom were familiar with professionalism in pharmacy. The participants included two male faculty members, one of whom retired during the last calendar year, and six female faculty members. The gender makeup of this sample paralleled the current make up of pharmacy class cohorts. Additionally, six of the group serve (or did recently serve) on the school of pharmacy faculty while the remaining two are full-time practicing pharmacists who also serve as preceptors.

Phase 2

The second sample consisted of 74 third-year pharmacy students and 85 fourth-year pharmacy students who were invited to complete a pretest, educational training, and a posttest. Students were notified that a study was underway and were invited to participate. As an incentive, students had a chance to win one of ten $20 cash honorariums drawn at the conclusion of the study. Students were required to complete all portions of the study to be eligible for the honorariums. Winners were be drawn utilizing a random number generator using Excel.

Table 4.1 describes the breakdown of the gender of the participants as well as the rate of attrition seen between the two rounds of the survey.

Table 4.1

Pretest and Posttest Sample Sizes and Attrition Counts by Gender and Class

Gender	Pretest	Class	Posttest	Class	Attrition
Male	12	P3 6 P4 6	9	P3 6 P4 3	3
Female	51	P3 20 P4 31	36	P3 15 P4 21	15
Total	63		45		18

Of the initial of pool n = 159 pharmacy students invited to participate, n = 63 completed the pretest (pretest response rate: 39.6%). Of these participants, n = 45 completed the posttest (posttest response rate: 28.3%, attrition rate: 28.6%).

Instrumentation

A multiple-choice survey (See Appendix C) was created utilizing the definition of each of the six tenets of professionalism for pharmacy students as defined by Chisholm et. al, (2006). Each question had four possible answers. The correct answer was the Chisholm definition. The three other possible choices came from the available literature. The survey also contained six

case-based scenarios that address the six tenets of professionalism for pharmacy students. To adequately address each of the six tenets of professionalism for pharmacy students in relevant, case-based scenarios, the scenarios were created based upon information from the NDSU Experiential Education files and from the available literature. Each scenario asked for the single, best answer, in multiple choice format, for actions supporting the tenet or a lack of action supporting the tenet.

In order to create the survey instrument, four pharmacy faculty were initially asked to review the survey for clarity and readability. These individuals, all of whom are licensed pharmacists with PharmDs, are members of the NDSU School of Pharmacy faculty. These pilot faculty were chosen specifically because they teach in the PharmD program and either have a practice site where professionalism is expected and modelled or teach in the Concept Pharmacy where professionalism is expected, discussed and modelled. All pilot testers have assessed students on levels of professionalism. As a result of the initial review, formatting was the primary suggestion to increase clarity of questions.

Procedure

This study was implemented in two phases, the first focused on survey development and the second focused on primary data collection. Description of each phase follows.

Phase 1

Eight subject matter experts were identified by their familiarity to the researcher. All have significant experience modelling, teaching, and assessing professionalism in pharmacy students. The subject matter experts were provided the survey instrument and educational PowerPoint (See Appendix B). There were twelve scenarios available to the researchers. These experts were asked to complete the survey instrument utilizing the available educational

PowerPoint. The subject matter expert's answers were compared to identify any areas that require clarification based upon differing answers and to ensure that the response options are reasonable, yet yield only one correct answer. Scenarios were deemed appropriate for use if 75%, or 6 out of 8, subject matter experts agreed on one single best answer. Edits were made and redistributed to subject matter experts until one appropriate scenario for each tenet was attained.

Phase 2

The participants in this survey were third and fourth year pharmacy students. The participants were given a brief introduction to the study, including the purpose of the study, the format of the pretest and posttest, and the educational PowerPoint, and necessary information to allow them to provide informed consent to participate. Participants also received the expected delivery date of the pretest, educational PowerPoint, and posttest, the expected length of time to complete each of the two phases, and expected study completion dates. Participants were also informed that professionalism in pharmacy is important for collaborations with other healthcare workers, for development of a professional identity, and for optimal patient care outcomes. Examples, both local and from the literature, along with common causes for course failure due to a lack of professionalism, will be discussed. Participants were instructed to answer questions based upon their knowledge at the time of the pretest, given no preliminary information, and were directed to avoid looking up any additional information regarding the six tenets. They were not allowed to ask any questions during the administration of the pretest. Reminder emails were delivered periodically via Qualtrics (See Appendix E).

After completing the survey, a short educational PowerPoint presentation was provided to participants via Blackboard and email. The PowerPoint presentation contained definitions and examples of each of the six tenets of professionalism for pharmacy students. Definitions for each

of the six tenets came from the Chisholm criteria, the Merriam-Webster Online Dictionary and other available pharmacy literature. Examples of application of the six tenets of professionalism for pharmacy students were taken from the Oath of a Pharmacist and from the available pharmacy literature. Participants were directed to review the PowerPoint material as often as they wish, including during the posttest.

One week after receiving the educational PowerPoint, participants were given the same survey as a posttest. Qualtrics functionality was used to determine which students had completed the pretest and were then eligible to complete the educational material review and posttest. The posttest was delivered via Qualtrics with reminder emails sent via Qualtrics. Participants were instructed to reference the PowerPoint educational materials to assist with answering the questions on the posttest. Students completing the posttest were then redirected to a third survey where they were prompted to enter their name for the cash honorarium drawing.

The pretest and posttest were be scored identically, with one point assigned to each question. No partial credit will be assigned for any answer.

Data Analysis

Data analysis also occurred in two phases, the first to ensure the reliability and validity of the survey instrument using the subject matter experts and the second to assess participant growth as a result of the learning activity. Descriptions of each phase of the analysis follow.

Phase 1

The survey data from the eight subject matter experts was compared for reliability of answers to the six tenets of professionalism for pharmacy students' definitions and scenarios. Scenarios not reaching 75% agreement, or 6 out of 8 subject matter expert responses, with a single, best, correct answer were edited and reassessed until 75% agreement was reached for six

case-based scenarios. Items scoring less than 75% agreement were discarded from the survey instrument. Subject matter expert answers were not used to answer the research questions.

Phase 2

Each question was examined for statistically significant differences between the pre-educational information responses and post-educational information responses. Within-subjects *t*-tests and *z*-tests were run on the pretest and posttest results and results using STADA to determine whether knowledge increased as a result of the learning activity.

CHAPTER 4: RESULTS

Chapter 4 contains details on data cleaning, nonresponse, and attrition collected from the study population along with a detailed presentation of the analytical results of this study. The population of this study included third and fourth year pharmacy students. The P3 cohort included third year pharmacy students enrolled in the fall semester of the 2020-2021 academic year at NDSU. It was determined that 73 students were in the P3 cohort. The P4 cohort included fourth year pharmacy students enrolled in the fall semester of the 2020-2021 academic year at NDSU. It was determined that 82 students were in the P4 cohort.

Research Questions

The section containing the various analyses is organized according to the relevant research questions. As a convenient reference, the research questions are restated here:

1A: Before being provided educational materials related to Chisholm's model, do students understand the meaning of each of Chisholm's six tenets of professionalism?

1B: Before being provided educational materials related to Chisholm's model, can students apply these tenets in case-based learning activities?

2A: Does understanding of the six tenets of professionalism increase when students are provided education materials related to Chisholm's model?

2Ai: Are there differences in understanding with respect to gender and class rank?

2B: Does application of the six tenets of professionalism in case-based learning activities increase when students are provided education materials related to Chisholm's model?

2Bi: Are there differences in understanding with respect to gender and class rank?

Data Cleaning and Processing

There was some unit nonresponse (no answers given for any question), but no item nonresponse (if respondent answered, all items had valid responses). Only those respondents with complete response sets from both the pretest and posttest were retained for analysis.

Analysis

The results presented in the section are organized according to the relevant research question.

Prior Understanding of the Tenets (RQ 1A)

The pretest results for the identification of the correct definitions of the six tenets of professionalism are shown in Table 4.2. Proportions of correct and incorrect answers for each item were compared using a *z*-test.

Table 4.2

Counts and Proportions of Correct/Incorrect Responses to Tenet Definition (Understanding) Items from the Pretest

Professionalism tenet	Correct	Incorrect	P-value for difference of proportions[a]
Altruism	41	22	
	65.08%	34.92%	.017
Accountability	19	44	
	30.16%	69.84%	.002
Excellence	55	8	
	87.30%	12.70%	< .001
Duty	30	33	
	47.62%	52.38%	.705
Honor and integrity	55	8	
	87.30%	12.70%	< .001
Respect for others	55	8	
	87.30%	12.70%	< .001

Note. $n = 63$.

[a]The null hypotheses are for equal proportions ($\alpha = .05$, nondirectional).

Most of the study participants were able to correctly recognize the definitions of altruism, excellence, honor and integrity and respect for others. Less than half of the study participants were able to correctly recognize the definition of accountability and duty.

Prior Ability to Apply Tenets (RQ 1B)

The pretest results for the identification of the correct application of the six tenets of professionalism are shown in Table 4.3. Proportions of correct and incorrect answers for each item were compared using a *z*-test.

Table 4.3

Counts and Proportions of Correct/Incorrect Responses to Tenet Application Items from the Pretest

Professionalism tenet	Correct	Incorrect	P-value for difference of proportions[a]
Altruism	10 15.87%	53 84.13%	< .001
Accountability	52 82.54%	11 17.46%	< .001
Excellence	43 68.25%	20 31.75%	.004
Duty	15 23.81%	48 76.19%	< .001
Honor and integrity	40 63.49%	23 36.51%	.032
Respect for others	22 34.92%	41 65.08%	.017

Note. $n = 63$.
[a]The null hypotheses are for equal proportions ($\alpha = .05$, nondirectional).

The majority of the study participants were able to correctly apply the following tenets to case-based activities: accountability, excellence and honor and integrity. Approximately one-third of study participants were able to correctly apply respect for others in a case-based learning

activity. Approximately one-fifth of students were able to correctly apply duty in a case-based learning activity and one-sixth were able to correctly apply altruism in a case-based learning activity.

Change in Understanding (RQ 2A)

This research question is addressed using two lines of empirical evidence. First, the pretest and posttest scores were compared. Second, the proportions of correct responses for each of the six items at the posttest were examined (to be compared to the previous analysis from the pretest).

Comparison of pretest and posttest scores for understanding questions

Participant pretest and posttest scores for tenet understanding are compared in Table 4.4.

Table 4.4

Comparison of Pretest and Posttest Scores for Tenet Definition (Understanding)

Measurement	*n*	*M*	*SE*	*SD*	95% CI
Pretest	45	4.066667	0.1399856	0.939052	[3.784544, 4.348789]
Posttest	45	5.177778	0.1690403	1.133957	[4.837099, 5.518456]
Difference	45	1.111111	0.2207019	1.480513	[0.666316, 1.555907]

Note. $t(44) = 5.0344$, $p < .001$ (nondirectional).

Table 4.4 shows that mean scores improved by a margin of 1.1 points (on a 0 to 6 scale). The pretest and posttest scores were compared using a repeated-measures (paired) *t*-test.

Proportions of correct responses on tenet definition (understanding) questions

The posttest results for the identification of the correct definitions of the six tenets of professionalism are shown in Table 4.5.

Table 4.5

Counts and Proportions of Correct/Incorrect Responses to Tenet Definition (Understanding) Items from the Posttest

Professionalism tenet	Correct	Incorrect	P-value for difference of proportions[a]
Altruism	41 91.11%	4 8.89%	< .001
Accountability	27 60.00%	18 40.00%	.180
Excellence	43 95.56%	2 4.44%	< .001
Duty	38 84.44%	7 15.56%	< .001
Honor and integrity	41 91.11%	4 8.89%	< .001
Respect for others	43 95.56%	2 4.44%	< .001

Note. $n = 45$.
[a]The null hypotheses are for equal proportions ($\alpha = .05$, nondirectional).

After educational material was provided, the majority of the study participants were able to correctly recognize the definitions for all of the six tenets however, nearly one-third of study participants were still unable to recognize the definition of accountability. The greatest gains in understanding were seen with duty (+37%) and accountability (+30%). Proportions of correct and incorrect answers for each item were compared using a *z*-test.

Table 4.6 provides a detailed summary of the differences in pretest and posttest understanding of the tenet definitions.

Table 4.6

Comparison of Proportions of Correct Responses for the Tenet Definition (Understanding) Items from Pretest and Posttest

Professionalism tenet	Pretest	Posttest
Altruism	65.08%[1]	91.11%[1]
Accountability	30.16%[2]	60.00%[3]
Excellence	87.30%[1]	95.56%[1]
Duty	47.62%[3]	84.44%[1]
Honor and integrity	87.30%[1]	91.11%[1]
Respect for others	87.30%[1]	95.56%[1]

Note. [1] indicates a significant proportion of correct responses greater than 50%; [2] indicates a significant proportion less than 50%; [3] indicates nonsignificant difference from 50%.

As seen in Table 4.6, all students improved their understanding of the six tenets of professionalism. The largest increase was observed with duty and the smallest increase was observed with honor and integrity

By gender

Tables 4.7 and 4.8 detail the differences in tenet understanding by gender on the pretest and posttest.

Table 4.7

Comparison of Pretest for Tenet Definition (Understanding) Scores by Gender

Gender	*n*	*M*	*SE*	*SD*	95% CI
Male	12	4.25	0.328564	1.138180	[3.526835, 4.973165]
Female	51	4.00	0.134310	0.959166	[3.73023, 4.26977]
Mean difference		0.25	0.318866		[-0.3876119, .8876119]

Note. $t(61) = 0.7840$, $p = .436$ (nondirectional).

Table 4.8

Comparison of Posttest for Tenet Definition (Understanding) Scores by Gender

Gender	*n*	*M*	*SE*	*SD*	95% CI
Male	9	4.78	0.3239418	0.971825	[4.030767, 5.524789]
Female	36	5.28	0.1935922	1.161553	[4.884765, 5.670791]
Mean difference		-0.50	0.4206314		[-1.348284, 0.3482841]

Note. $t(43) = -1.1887$, $p = .241$ (nondirectional).

As seen in Table 4.7, male survey participants scored marginally higher than female survey participants, however, as detailed in Table 4.8, on the posttest survey, female survey participants scored higher than male survey participants, indicating that while male participants may have had a greater initial understanding of the six tenets, female participants were able to improve upon their scores to a greater extent.

By class

Tables 4.9 and 4.10 detail the differences in tenet understanding by class on the pretest and posttest.

Table 4.9

Comparison of Pretest Tenet Definition (Understanding) Scores by Class

Class	*n*	*M*	*SE*	*SD*	95% CI
P3	26	4.23	0.1865285	0.951113	[3.846606, 4.614932]
P4	37	3.92	0.1661179	1.010456	[3.582016, 4.255822]
Mean difference		0.31	0.2524696		[-.192994, 0.8166946]

Note. $t(61) = 1.2352$, $p = .222$ (nondirectional).

Table 4.10

Comparison of Posttest Tenet Definition (Understanding) Scores by Class

Class	*n*	*M*	*SE*	*SD*	95% CI
P3	21	5.24	0.1940148	0.8890873	[4.833388, 5.642803]
P4	24	5.13	0.2712859	1.329024	[4.563802, 5.686198]
Mean difference		0.11	0.3423176		[-.5772539, 0.8034444]

Note. $t(43) = 0.3304$, $p = .743$ (nondirectional).

As detailed in Tables 4.9 and 4.10, the P3 class scored marginally higher on the understanding portion of the pretest and posttest than did the P4 class. This difference is not statistically significant.

In general, participants were able to improve their understanding of the definitions of the six tenets by one full point. The greatest improvement was seen with accountability and duty and the smallest improvement was seen with honor and integrity. Differences between class and gender were not significant.

Change in Ability to Apply (RQ 2B)

The pretest results of participant ability to apply each of the six tenets in a case-based scenario were compared to posttest results.

Comparison of pretest and posttest scores for application questions

Table 4.11 compares the results of the application portion of the pretest and posttest.

Table 4.11

Comparison of Pretest and Posttest Scores for Application of Tenets

Measurement	*n*	*M*	*SE*	*SD*	95% CI
Pretest	45	2.82	0.1861055	1.248433	[2.447151, 3.197293]
Posttest	45	3.18	0.1777778	1.19257	[2.81949, 3.536065]
Difference	45	0.36	0.2063525	1.384255	[-0.060321, 0.771432]

Note. $t(44) = 1.7230$, $p = .092$ (nondirectional).

As seen in Table 4.11, study participants scored slightly higher on the application portion of posttest. However, the change was not statistically significant.

Proportions of correct responses on application of the tenet questions

Table 4.12 details both the physical count and proportion of correct and incorrect answers, as well as the significance of the proportions for the Application items on the posttest.

Table 4.12

Counts and Proportions of Correct/Incorrect Responses to Tenet Application Items from the Posttest

Professionalism tenet	Correct	Incorrect	P-value for difference of proportions[a]
Altruism	11 24.44%	34 75.56%	< .001
Accountability	33 73.33%	12 26.67%	.002
Excellence	35 77.78%	10 22.22%	< .001
Duty	15 33.33%	30 66.67%	.025
Honor and integrity	29 64.44%	16 35.56%	.053
Respect for others	20 44.44%	25 55.56%	.456

Note. $n = 45$.

[a]The null hypotheses are for equal proportions ($\alpha = .05$, nondirectional).

The results reported in Table 4.12 show that after educational material was provided, slight improvement was seen on the case-based application exercises for altruism, excellence, duty, honor and integrity and respect for others. A slight decrease was seen on the case-based application exercise for accountability. Differences were marginally significant for honor and integrity and not statistically significant for respect for others.

Table 4.13 provides a detailed summary of the differences in pretest and posttest application of the tenet definitions.

Table 4.13

Comparison of Proportions of Correct Responses for the Application Items from Pretest and Posttest

Professionalism tenet	Pretest	Posttest
Altruism	15.87%[2]	24.44%[2]
Accountability	82.54%[1]	73.33%[1]
Excellence	68.25%[1]	77.78%[1]
Duty	23.81%[2]	33.33%[2]
Honor and integrity	63.49%[1]	64.44%[3]
Respect for others	34.92%[2]	44.44%[3]

Note. [1] indicates a significant proportion of correct responses greater than 50%; [2] indicates a significant proportion less than 50%; [3] indicates nonsignificant difference from 50%.

As seen in Table 4.13, participants were able to improve their ability to apply all the tenets with the exception of accountability which showed a slight decrease on the posttest.

By gender

Pretest and posttest ability to apply the tenets was analyzed for gender differences. The results are reported in Tables 4.14 and 4.15.

Table 4.14

Comparison of Pretest Application Scores by Gender

Gender	*n*	*M*	*SE*	*SD*	95% CI
Male	12	3.17	0.270615	0.937437	[2.571048, 3.762286]
Female	51	2.82	0.176471	1.260252	[2.469078, 3.177981]
Difference		0.34	0.387718		[-0.432153, 1.118427]

Note. $t(61) = 0.8850$, $p = .380$ (nondirectional).

Table 4.15

Comparison of Posttest Application Scores by Gender

Gender	*n*	*M*	*SE*	*SD*	95% CI
Male	9	2.89	0.4547418	1.364225	[1.840252, 3.937525]
Female	36	3.25	0.1926218	1.155731	[2.858957, 3.641043]
Difference		-0.36	0.4461973		[-1.260954, 0.5387315]

Note. $t(43) = -0.8093$, $p = .423$ (nondirectional).

As seen in Tables 4.14 and 4.15, after educational materials were provided, male survey participants scored higher than female survey participants on the pretest. However, female survey participants scored higher than male survey participants on the posttest. Scores on the posttest decreased for male survey participants. Differences were not statistically significant.

By class

Pretest and posttest ability to apply the tenets was analyzed for differences between classes. The results are reported in Tables 4.16 and 4.17.

Table 4.16

Comparison of Pretest Application Scores by Class

Class	*n*	*M*	*SE*	*SD*	95% CI
P3	26	2.69	0.2058321	1.049542	[2.268388, 3.116227]
P4	37	3.03	0.2139521	1.301420	[2.593112, 3.460942]
Difference		-0.33	0.3082602		[0-.9511238, .2816851]

Note. $t(61) = -1.0858$, $p = .282$ (nondirectional).

Table 4.17

Comparison of Posttest Application Scores by Class

Class	*n*	*M*	*SE*	*SD*	95% CI
P3	21	3.14	0.1986348	0.910259	[2.728512, 3.557202]
P4	24	3.21	0.2885444	1.413573	[2.611434, 3.805233]
Difference		-0.07	0.3603298		[-0.7921504, .6611981]

Note. $t(43) = -0.1817$, $p = .857$ (nondirectional).

As detailed in Tables 4.16 and 4.17, after educational materials were provided, the P4 class scored slightly higher on both the pretest and posttest on the application portion of the pretest and posttest. Differences were not statistically significant.

In general, participants were able to improve their ability to apply five of the six tenets. A slight decrease was seen with accountability. Differences were marginally significant for honor and integrity and not statistically significant for altruism, duty, excellence, and respect for others.

Summary

Before educational materials were provided, participants had an understanding of the six tenets of professionalism. Some participants had a better understanding of the tenets than others, but all participants had a baseline understanding of the tenets. In general, male participants

scored higher on the pretest than did female participants but differences between gender and class were not significant.

Participants had a lower baseline score with respect to the ability to apply the six tenets on the pretest as compared to understanding of the tenets. Male participants also scored higher than female participants on the pretest. Differences between gender and classes were not statistically significant.

Overall, with an educational intervention, students were able to improve their understanding of the six tenets of professionalism for pharmacy students. The tenet that showed the largest increase in understanding was duty and the tenet that showed the smallest increase in understanding was honor and integrity. Differences between classes and gender were not statistically significant.

Application of the tenets yielded mixed results with the posttest. Participant's demonstrated improvement in application of all tenets with the exception of accountability which showed a slight decrease. The tenet that showed the largest increase in application in a case-based scenario was respect for others. The tenet that showed the smallest increase in application in a cased-based scenario was honor and integrity. Male participants scored lower than female participants and in fact, showed a slight decrease in score on the posttest. Differences between classes and gender were not statistically significant.

CHAPTER 5: DISCUSSION

Professionalism behaviors are an important aspect of the profession of pharmacy. Students are expected to behave in a professional manner during the didactic and experiential portions of pharmacy school. Some students have difficulty meeting the expectation of professionalism by both professors and preceptors and therefor it is important to understand what student understanding of professional and unprofessional behaviors entail in order to help them develop the skills and attitudes to behave as the profession expects.

To assess student understanding of the tenets, multiple choice questions were administered as a pretest and posttest. Each question had four possible answers with just one correct answer. Pretest results indicated that the tenets most understood were excellence, honor and integrity and respect for others while the least understood tenet was accountability. Score improvement was seen with each of the six tenets of professionalism with the delivery of a brief educational intervention and was statistically significant. The posttest results indicated that excellence and respect for others were the most understood tenets and accountability remained the least understood of the tenets. While not statistically significant, interestingly, male participants scored higher than female participants on the pretest for understanding. However, female participants scored higher than male participants on the posttest. Results between class cohorts were mixed and not statistically significant. P3 participants scored slightly higher than P4 participants on the understanding questions while P4 participants scored slightly higher than P3 participants on the application questions. This may be due to P4 participant experiences while on rotation, where they see these tenets in real-time.

The results of the application questions related to the six tenets, while not statistically significant, are relevant. Participants showed slight to modest improvement in their ability to

apply all of the tenets with the exception of accountability which showed a slight decrease. Only two of the tenets, accountability and excellence, were applied correctly in over half of the responses. While students may recognize the definitions of the tenets, clearly they are unable to accurately apply them. This may be due to the subjective nature of the tenets themselves, the overlapping nature of the tenets or something else. As seen with the results for understanding, male participants scored higher than female participants on the pretest for application. Female participants also scored higher than male participants on the posttest. Differences between the classes were not statistically significant.

Implications for Theory

If professionalism defined and applied is truly a level of competence as was the intent of the early ethicists, should the six tenets of professionalism be used to determine professionalism behaviors for pharmacy students? These early ethicists of the 18th century and earlier (Locke, Hume, etc.) referred to unprofessional behaviors as actions that were in violation of codes of medical ethics which were built around four specific principles (beneficence, nonmaleficence, autonomy and justice). If professionalism is mapped to these four principles of bioethics, are the six tenets truly markers of professionalism? Are commonly agreed upon unprofessional behaviors in the literature truly unprofessional or merely individual-specific annoyances. The six tenets of professionalism for pharmacy students may be loosely coupled to medical ethics, but even that coupling is debatable in many instances.

Professionalism has long been a subjective measure. It is easy to spot but hard to describe and assess. This was evidenced with the creation of this study. Current views on unprofessional behaviors do not match what the original bioethicist's describe as professionalism. The implications to theory are to either rethink what is truly unprofessional behavior and what is

simply an annoyance as mapped to bioethics, or to step away from the bioethicist description of professionalism and look to the current profession to clearly define its professionalism expectations. Once clearly defined, new assessment instruments will be necessary.

Implications for Research

The findings in this study indicate that students understand the definition of each of the six tenets but find the tenets difficult to apply correctly in case-based scenarios. Two tenets, duty and respect for others did not reach the 75% agreement benchmark among the subject matter experts utilized for this study. Two revisions were attempted before contacting an ethicist for assistance. With guidance, a third revision was distributed. Though this revision performed better, these two tenets still did not reach the 75% agreement benchmark. Duty (50% consensus) was often confused with Altruism, Honor and Integrity or Respect for Others. Respect for Others (50% consensus) was often confused with Duty and Accountability. Therefor it is not surprising that students scored poorly on these two application questions as well. The subjective nature of the tenets coupled with the lack of a clear and consistent definition of professionalism makes appropriate application of the tenets difficult for students and pharmacists alike. Based upon this information, were this study to be repeated, additional scenario revisions with the help of other ethicists and subject matter experts until the tenets perform appropriately could be beneficial.

Implications for Practice

A certain level of professionalism is expected of students and so it is important that students understand the meaning of the six tenets of professionalism. Students were able to improve their understanding of the six tenets of professionalism and were able to slightly improve their ability to appropriately apply all but one of the tenets with a simple educational intervention. The tenet of accountability was inappropriately applied during both the pretest and

posttest by most students. A slight decrease was observed after the educational intervention, possibly because students were not confident about the application of accountability to begin with and were further confused after viewing the educational materials.

Based upon the results of this study, those that evaluate students may not have an appropriate understanding of professionalism. It seems unfair to hold students to a measure of professionalism using terms that are not fully understood by those who evaluate them. Using the bioethics-based definition of professionalism, items documented in the literature as unprofessional behavior often do not violate codes of ethics and thus, are not truly unprofessional. This leads to concerns over assessment instrument validity. To improve this validity, a clearer, more consistent definition is needed; either using the original bioethics definition or having the profession clearly define its expectations for behaviors and then educating those that evaluate students.

Future Research

There are areas for future research involving pharmacy students, preceptors, and professionalism. A more robust educational intervention administered to first year students would provide a baseline of professionalism knowledge leading to longitudinal tracking of students for improvement in understanding as well as application of the tenets. Surveying students in other areas of the country may be beneficial to see if those results are similar to the results from this region. Before pursuing this research, knowledge of the profession's understanding of professionalism would be beneficial. Having a clear and consistent definition of professionalism as expected by the profession would be a benefit for the development of a relevant educational intervention.

Surveying preceptors would be beneficial to have a better understanding of what preceptors consider unprofessional behavior. These results may lead to a more robust educational intervention for students, or a preceptor development educational opportunity. The results of a more robust survey could be used for an educational intervention and then be compared with this simple educational intervention to determine which intervention improves performance. Surveying preceptors in other areas of the country may be beneficial to determine if these results are representative of other preceptor populations in different regions.

Limitations

This study did have limitations. There was a significant number of students lost to attrition that led to a smaller '*n*', however, those students who did complete the survey answered all questions in the survey and distribution between the classes was fairly even. Males were underrepresented, making up just 20% of the posttest sample population. This underrepresentation is somewhat supported by recent findings from the AACP (2020) that female students make up approximately 63% of both enrollment in PharmD programs as well as graduation from PharmD programs. The underrepresentation of males in this survey may lead to unintentional gender bias when examining the results. Finally, these results are representative of the NDSU School of Pharmacy students and is representative of the upper Midwest based upon student residency demographics.

Conclusion

The findings of this study indicate that students do have a baseline understanding of the six tenets of professionalism and with a simple educational intervention are able to significantly increase their understanding of most tenets. Students were also able to slightly improve their ability to apply the six tenets to case-based scenarios. Whether this baseline level of

understanding and the ability to apply the tenets is from upbringing, work experience, education, or something else is unknown but is worthy of further exploration.

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APPENDIX A: IRB APPROVAL

NDSU NORTH DAKOTA STATE UNIVERSITY

September 10, 2020

Dr. Teri Undem
Pharmacy Practice

Re: IRB Determination of Exempt Human Subjects Research:
Protocol #PH21041, "Improving Professionalism Self-Awareness"

NDSU Co-investigator(s) and research team: Chris Ray
Date of Exempt Determination: 9/10/2020 Expiration Date: 9/9/2023
Study site(s): NDSU Funding Agency: n/a
The above referenced human subjects research project has been determined exempt (category 1) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the revised protocol received 9/8/2020.

Please also note the following:
• If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
• The study must be conducted as described in the approved protocol. Changes to this protocol must be approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
• Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
• Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.
Sincerely,

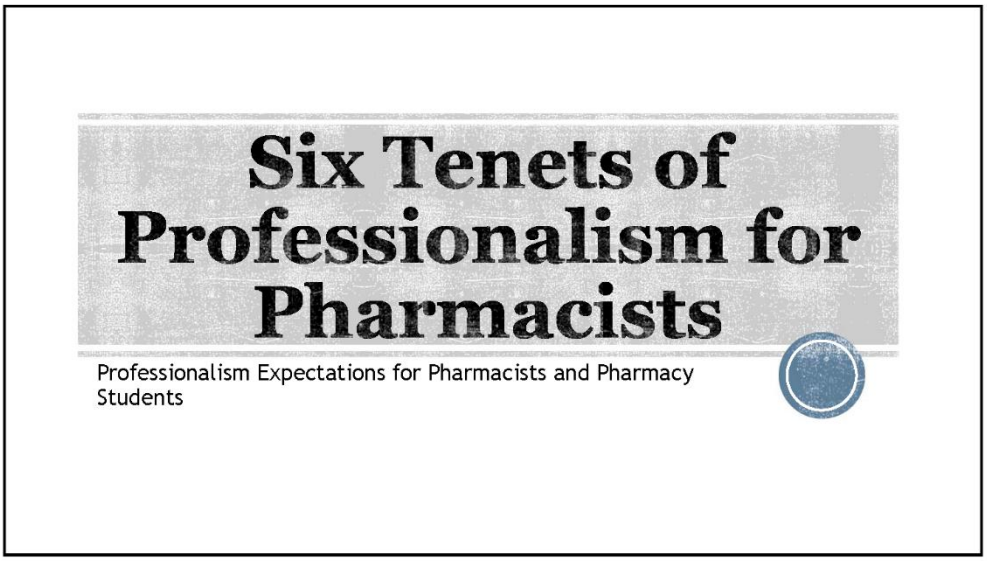
Kristy Shirley

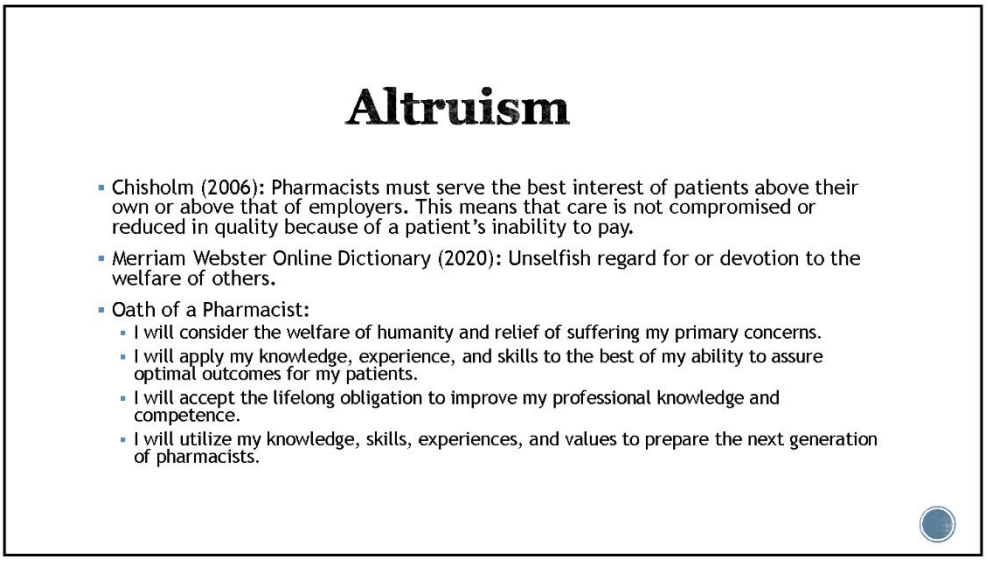
Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult https://www.ndsu.edu/research/for_researchers/research_integrity_and_compliance/institutional_review_board_irb/. This Institution has an approved FederalWide Assurance with the Department of Health and Human Services: FWA00002439.

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb
Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102
NDSU is an EO/AA university.

APPENDIX B: EDUCATIONAL INTERVENTION





Examples of Altuism

- Exceeding Expectations
- Equal quality of care for all
- Staying late or coming in early
- Life-long learning
- Precepting students

Accountability

- Chisholm (2006): Pharmacists are accountable for fulfilling the implied covenant that they have with their patients. They are also accountable to society for addressing the health needs of the public and to their profession for adhering to pharmacy's code of ethical conduct.
- Merriam Webster Online Dictionary: An obligation or willingness to accept responsibility or to account for ones actions.
- Oath of a Pharmacist:
  - I will utilize my knowledge, skills, experiences, and values to prepare the next generation of pharmacists.

Examples of Accountability

- Attending classes daily
- Attending work when scheduled
- Accepting the consequences of one's actions
- Completing assignments independently and on time

Excellence

- Chisholm (2006): Pharmacists must be committed to lifelong learning and knowledge acquisition or retrieval to serve patients. This includes wanting to exceed expectations, producing quality work, fulfilling responsibilities, and commitment to helping patients and others.
- Merrian-Webster Online Dictionary: A virtue, the quality of being excellent.
- Oath of a Pharmacist:
  - I will accept the lifelong obligation to improve my professional knowledge and competence.
  - I will embrace and advocate changes that improve patient care.

Examples of Excellence

- Producing quality work
- Commitment to lifelong learning
- Committed to helping others
- Fulfilling responsibilities
- Exceeding Expectations
- Adhering to ethical conduct in school and at work

Duty

- Chisholm (2006): Pharmacists must be committed to serving patients even when it is inconvenient to the pharmacist. The pharmacist is an advocate for the appropriate care regardless of the circumstances.
- Merriam-Webster Online Dictionary: Obligatory tasks, conduct, service or functions that arise from one's position; a moral or legal obligation.
- Oath of a Pharmacist
  - I will consider the welfare of humanity and relief of suffering my primary concerns.
  - I will apply my knowledge, experience, and skills to the best of my ability to assure optimal outcomes for my patients.
  - I will utilize my knowledge, skills, experiences, and values to prepare the next generation of pharmacists.

Examples of Duty

- Reporting an error that no one else was aware of
- Patient advocacy in all situations
- Commitment to lifelong learning
- Adhering to codes of conduct both at school and work
- Precepting students

Honor & Integrity

- Chisholm (2006): Pharmacists must be fair, truthful, keep his/her word, meet commitments and be straightforward.
- Merriam-Webster Online Dictionary: **Honor**: One's word given as a guarantee of performance.
  - **Integrity**: A keen sense of ethical conduct; incorruptibility.
- Oath of a Pharmacist:
  - I will hold myself and my colleagues to the highest principles of our profession's moral, ethical and legal conduct.

Examples of Honor & Integrity

- Honesty in all situations
- Accepting consequences for one's own actions
- Submitting your own, quality work
- Reporting an error even if no one else is aware of it

Respect for Others

- Chisholm (2006): Pharmacists must respect other pharmacists, health professionals, patients, and their families.
- Merriam Webster Online Dictionary: High or special regard of others.
- Oath of a Pharmacist:
  - I will respect and protect all personal and health information entrusted to me.

Examples of Respect for Others

- Arriving on time
- Taking time and attentively listen to another person
- Respectful to individuals whose background is different from your own
- Exceeding expectations of others
- Completing assigned work/tasks on time (or early)

APPENDIX C: PRE AND POSTTEST

Question 1: Which of the following definitions or examples best fits your ***current*** understanding of the word "Altruism"?

a.) Acceptance of consequences for behaviors.
b.) Truthfulness
c.) The ability to see multiple perspectives in a situation (i.e. pros and cons of a treatment plan.)
d.) Serving the best interest of patients above your own.

Question 2: Which of the following definitions or examples best fits your ***current*** understanding of the word "Accountability"?

a.) Doing 'the right thing' in all situations.
b.) Adhering to pharmacy's code of ethical conduct.
c.) The unselfish regard for or devotion to the welfare of others.
d.) A punitive response to doing something wrong.

Question 3: Which of the following definitions or examples best fits your ***current*** understanding of the word "Excellence"?

a.) Commitment to lifelong learning and knowledge acquisition to serve patients.
b.) Making the most of every situation.
c.) Learning from mistakes.
d.) Speaking with good purpose.

Question 4: Which of the following definitions or examples best fits your ***current*** understanding of the word "Duty"?

a.) Unselfish regard for or devotion to the welfare of others.
b.) Any assigned task by someone in authority.
c.) Moral principles that govern a person's behavior.
d.) Commitment to serving patients even when it is inconvenient.

Question 5: Which of the following definitions or examples best fits your ***current*** understanding of the phrase "Honor and Integrity"?

a.) Providing patient care to all patients equally.
b.) Precepting students.
c.) Doing the 'right thing' even when the 'right thing' is against company policy.
d.) Being fair, truthful, keeping your word, meeting commitments.

Question 6: Which of the following definitions or examples best fits your ***current*** understanding of the phrase "Respect for Others"?

a.) Respecting other pharmacists, health professionals, patients and families
b.) To admire as a result of wealth.
c.) Acceptance of others.
d.) Counselling all patients equally.

Case #1: You are on a critical care rotation. Your patients currently are all cardiac patients. As you are leaving work on Friday, you hear one of the attendings mention new guidelines for managing heart failure. You know several of your patients may be affected by these changes; hopefully for the better. Over the weekend you research these new guidelines and put together a quick chart reference guide. After discussion with your preceptor you ask the attendings if they are interested in hearing about your weekend research. An impromptu interprofessional journal club is scheduled.

Which of the six tenets of professionalism for pharmacists is ***present*** in this scenario? Select the **ONE** best answer:

a.) Altruism
b.) Accountability
c.) Excellence
d.) Duty
e.) Honor and Integrity
f.) Respect for Others

Case #2: You are a student at a community rotation site in your home town. While you are working a former classmate comes in whom you disliked immensely in school. This former classmate selects an OTC product and comes to you for checkout. The two of you make small talk. As you scan the product you notice that your former classmate has chosen a brand name product that is five times more expensive than the equivalent generic product. Additionally, the product will outdate in the next two weeks. You inform your former classmate that you believe that the product will be discontinued soon and he might consider buying a second bottle while still available.

Which of the six tenets of professionalism for pharmacists *is* ***lacking*** in this scenario? Select the **ONE** best answer:

a.) Altruism
b.) Accountability
c.) Excellence
d.) Duty
e.) Honor and Integrity
f.) Respect for Others

Case #3: You are completing an elective rotation in a busy emergency department (ED). Your assigned shift is midnight to 8:00am. It has been raining hard all day and night and the radio has ongoing announcements about flooding. You are worried about your basement flooding. You plan to test your new sump pump the minute you get home. At 7:00am the ED gets word of a massive vehicle pileup on the interstate. Dozens of patients are headed to your hospital for care. When your shift ends the patients are starting to trickle in via ambulance. You head for your sump pump.

Which of the six tenets of professionalism for pharmacists ***is lacking*** in this scenario? Select the **ONE** best answer:

a.) Altruism
b.) Accountability
c.) Excellence
d.) Duty
e.) Honor and Integrity
f.) Respect for Others

Case #4: You are on rotation at a local hospital. Your preceptor is tasked with determining which meds to add and/or remove from formulary. Two weeks prior to the next meeting, your preceptor gives you a list of 5 meds to research. Students at this hospital are not allowed to present at meetings so your preceptor will present your data. Your preceptor asks to have your findings 3 days before the meetings so that she can adequately prepare to present the information. You have 2 additional assigned projects and are preparing for residency interviews. You miss the deadline.

Which of the six tenets of professionalism for pharmacists ***is lacking*** in this scenario? Select the **ONE** best answer:

a.) Altruism
b.) Accountability
c.) Excellence
d.) Duty
e.) Honor and Integrity
f.) Respect for Others

Case 5 (per Dr. Dennis Cooley): You are the pharmacist-owner at a small rural community pharmacy, which is the only one in the area. One of your pharmacy's moral mandates is "we serve our patients first and foremost". When you hire new staff and conduct annual reviews, you make clear to your staff that they are responsible to use this principle for all patient interactions, regardless whether it is inconvenient to the staff. Which of the six tenets of professionalism for pharmacists is ***present*** in this scenario? Select the **ONE** best answer:

a.) Altruism
b.) Accountability
c.) Excellence
d.) Duty
e.) Honor and Integrity
f.) Respect for Others

Case 6 (per Dr. Dennis Cooley): Patrick Bergland is a pharmacist at a critical access hospital in north-central North Dakota. His assigned shifts always run from 8:00 am – 4:30 pm with a 30-minute break for lunch.
Administrators at the hospital are always impressed with Patrick, because he consistently takes his time to talk with patients in a friendly, patient way that is not patronizing or condescending. One day, the hospital CEO asked Patrick why he spent so much time helping an older patient. He replied: "My patients are not objects, but people who often are feeling vulnerable. They have placed their trust in me to help them because they can't help themselves That older patient needed a lot of help understanding how his new prescription worked, especially with the other medications he had to take daily. When any patient asks me about his or her medications, I want them to know whatever they want and need to know so that they are empowered to make their own informed choices and feel in control of their lives."
Which of the six tenets of professionalism for pharmacists is Patrick Bergland ***displaying*** in his response to the CEO? Select the **ONE** best answer:

a.) Altruism
b.) Accountability
c.) Excellence
d.) Duty
e.) Honor and Integrity
f.) Respect for Others

Demographic Questions

1. Name (must be provided to be eligible for $20 drawing)

2. Class Designation
    a. P3
    b. P4
3. Gender assigned at birth
    a. Male
    b. Female

APPENDIX D: INFORMED CONSENT

NDSU **North Dakota State University**
Department of Pharmacy Practice
Office of Experiential Education
1401 Albrecht Room 20C
NDSU Dept. 6050
PO Box 6050
Fargo, ND 58108-6050
701.231.6578

Title of Research Study: Improving Professionalism Self-Awareness

Dear Pharmacy Student:

My name is Teri Undem ☺. I am a faculty member in department of pharmacy practice at North Dakota State University, and I am conducting a research project to increase knowledge and self-awareness of professionalism issues while on rotation. It is my hope, that with this research, you will have a better understanding of what is expected of APPE students while on rotation and how professionalism is demonstrated in practice.

Because you are pharmacy student who will be starting APPE rotations in the next year, or are currently on APPE rotations, you are being invited to take part in this research project. Your participation is entirely your choice, and you may change your mind or quit participating at any time, with no penalty to you.

As an added incentive, ten $20 honorariums will be provided. Survey respondents completing the three steps (pre-survey, educational power point review, post-survey) of the process will be entered for a chance to win an honorarium. Winners will be selected using a random number generator. It should take about 30 minutes to complete the questions and other educational materials associated with the study. This study may be completed at any location you choose.

It is not possible to identify all potential risks in research procedures, but we have taken reasonable safeguards to minimize any known risks. There are no known risks associated with this project.

By taking part in this research, you may benefit by having a better understanding of preceptor expectations of students while on rotation and how professionalism is demonstrated in practice. However, you may not get any benefit from being in this study.

I will keep private all research records that identify you. Your information will be combined with information from other people taking part in the study, I will write about the combined information that has been gathered. You will not be identified in these

written materials. I may publish the results of the study; however, I will keep your name and other identifying information private.

If you have any questions about this project, please contact me at teri.undem@ndsu.edu 701-231-6578 or contact my advisor, Dr. Chris Ray, at chris.ray@ndsu.edu 701-231-7104.

You have rights as a research participant. If you have questions about your rights or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program at 701.231.8995, toll-free at 1-855-800-6717, by email at ndsu.irb@ndsu.edu, or by mail at: NDSU HRPP Office, NDSU Dept. 4000, P.O. Box 6050, Fargo, ND 58108-6050.

Thank you for your taking part in this research. If you wish to receive a copy of the results, please email me at teri.undem@ndsu.edu. Results will be provided to you at the conclusion of the project.

Teri Undem R.Ph.
Director, Advanced Pharmacy Practice Experience/Pharmacy Practice
School of Pharmacy
College of Health Professions
North Dakota State University

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Dept. 2660, PO Box 6050
Fargo, ND 58108-6050
Phone: 701.231.6578

APPENDIX E: COMMUNICATIONS TO PARTICIPANTS

Dear Pharmacy Student:

My name is Teri Undem :). I am a faculty member in department of pharmacy practice at North Dakota State University, and I am conducting a research project to increase knowledge and self-awareness of professionalism issues while on rotation. It is my hope, that with this research, you will have a better understanding of what is expected of APPE students while on rotation and how professionalism is demonstrated in practice.

Because you are pharmacy student who will be completing APPE rotations in the next year, or are currently on APPE rotations, you are being invited to take part in this research project. Your participation is entirely your choice, and you may change your mind or quit participating at any time, with no penalty to you.

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If you have any questions about this project, please contact me at teri.undem@ndsu.edu 701-231-6578 or contact my advisor, Dr. Chris Ray, at chris.ray@ndsu.edu 701-231-7104.

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Thank you for your taking part in this research. If you wish to receive a copy of the results, please email me at teri.undem@ndsu.edu. Results will be provided to you at the conclusion of the project.