

The impact of healthcare knowledge on the perception of physicians white coats.

Prepared for: Committee Members
Washington State University

Prepared by:
Chemistry and Pre-Medicine major
English 402, Section 14
Washington State University

February 24th, 2014

Written by B D H
oral- 4/5 B-

Introduction

In healthcare physicians are continuously thinking about the patient-doctor relationship and ways to improve it. A topic of discussion and at times approach to passively improve this relationship is to wear or not wear white coats when interacting with patients (Douse, 2004). Currently in the United State of America physician's white coats have become a symbol of competency, professionalism and authority in the medical field (Wear, 1998). Also in the United States of America, physicians in general are now known for wearing white coats when interacting with their patients (Doreen, 1998). Researchers evaluating these interactions have conclude that the patient-doctor relationship can change depending on whether or not a physician in wearing the white coat (McKinstry, 1991). Advice on how to dress in their professional setting has been given to doctors since the time of Hippocrates (Jones, 1923). Physicians are at times suggested to wear white coats in order to be quickly identified by patients and colleagues as well as upon graduating from medical school at their white coat ceremony (Wear, 1998). Yet on different occasions doctors may also be told that because their white coats may carry diseases from patient to patient that white coats should not be worn (Farrja, 1990). These and other related arguments have led to debates and research on the attire that physicians should be wearing to improve the overall quality of the patient-doctor relationship (Douse, 2004).

Current researchers have organized their experiments to comprehend the patient's perspective to better understand the effects of white coats (Kurihara, 2004). Publications on this subject have taken into account factors such as a patient's age, profession, preference for their physician's attire and opinions of varying doctor's choice of dress (Doreen, 1998). By conducting surveys researchers have progressed sciences understanding of the impact of the white coats in the medical field. Despite the progress that has been made more factors needed to be taken into consideration if the white coat is to be fully understood. This proposal seeks to research an important factor of the patient-doctor relationship that has not been previously studied.

Current researchers have yet to account for the impact of the patient's knowledge, or of lack of knowledge of the health field when creating their experiments. By taking this factor into consideration we could have a better of understanding of physicians perceptions of one another, and patient's viewpoints in relation to their education of the healthcare field that are due to the white coat. By analyzing this aspect of the patient-doctor relationship we can also find out how perceptions of the white coat changes amongst pre-health and non-pre-health students at the university level.

This research project specifically seeks to understand how Washington State University (WSU) Pre-Health and non-pre-health majors perceive physicians white coats in order to study this aspect of the patient-doctor relationship. Since pre-medicine students are seeking a career in the health-care field it is likely that as they have gathered a better understanding of the medical field than that of non-pre-medicine majors the more time they have spent at WSU. This is likely true because WSU pre-health majors apply to their respective professional school as either a third or fourth year student. This approach is being taken due to the busy schedule that is common for most physicians in the Pullman area.

Literature Review

Current literature has focused significantly on patients perception of physicians overall communication, friendliness, competency, effectiveness and several over factors. Several publications have also taken into account differences in perceptions that may be a result of gender and age.

One factor that has been studied is the type of attire that patients prefer their doctors to wear. B. McKinstry analyzed this topic with 475 patients in hopes of finding out whether patients felt that a doctor's style of dress influenced their respect for his or her opinion. McKinstry found that patients seemed to favor a more formal approach to dress, with the male doctor wearing a formal suit and tie and the female doctor in a white coat was the most preferred by patients.

Instead of the patient's preference of attire, H. Kurihara and his colleagues sought to find out how important physician attire was instilling confidence in patience. Kurihara also looked at the factors influencing the impression physician's attire made on patients. His study found that a physician's attire is one of the most important factors in inspiring confidence in patients behind speech and reputation. Kurihara found were the most appropriate style for doctors to wear regardless of gender.

A different approach was taken by R. Farraj as he examined the possible reasoning and functionality behind wearing a white coat. Farraj found that white coats are worn chiefly for easy recognition by colleagues and patients, to put items in the coats pockets, and to keep their casual clothes clean. He also found that specific doctors, pediatricians for example, do not wear white coats in an attempt to build rapport with their patients.

M. Doreen examined if young children had a preference regarding whether physicians do or do not wear a white coat. Doreen found that children between four and eight year's old preferred doctors with white lab coats. An interesting aspect of Doreen's research is that she found that patients identified as the most appropriate item of dress for a physician was the name tag.

J. Douse sought to find out whether doctors believed they should be wearing white coats when interacting with patients or if they should not. Douse also spoke to patients about the same topic. Douse found that most (70%) doctors believed that white coats are an infection risk and only 13% of doctors interviewed wore white coats. Douse also found that 56% of patients believed that doctors should wear white coats for easy identification compared to 24% of doctors who believed physicians should wear white coats.

Delese Wear chose to examine the white coat ceremonies that occur when medical students graduate from medical school and receive a white coat. Wear also explains what the symbol of the white coat has become over time. Wear states that the white coats expresses the "importance of compassion and humility... all things medical, scientific, and healing. It is also associated with the attributes of purity and goodness traditionally symbolized by the color white". She also goes on to state that the white coat also signifies privilege, and membership into the medical profession.

Why are there no in-text citations? Referencing the authors is not enough.

Methods

To research how the amount of healthcare related knowledge impacts an individual's perception of a physician's white coat, a survey will be conducted of WSU students. As many students as possible will be found to take this survey. The survey will consist of several sets of questions constructed to complete the three following goals:

1. distinguish between WSU pre-health and non-pre-health scholars.
2. identify WSU students' level of knowledge of the health field.
3. understand students' viewpoints regarding physician's white coats.

Goal 1. Distinguish between WSU pre-health and non-pre-health scholars

This goal will be reached by identifying and understanding students' undergraduate, graduate, professional and future educational goals. A question in this survey will be included to observe whether or not students identify as pre-health students while at WSU. Another question will ask for students to identify their major and minor. Three to five additional questions will seek to understand students' future educational goals.

This approach is being taken because a student's undergraduate studies may not directly correspond to healthcare, but he or she may have future goals of entering the healthcare field. Gathering this information and comparing it to the students' knowledge of the healthcare field may be show cause to place the student in the pre-health category during data analysis. This possible situation may occur if a student has a good understanding of the healthcare field (relative to students who identify as pre-health), but are currently focusing on other aspects of their education at this time.

Goal 2. Identify WSU students' level of knowledge of the health field

To evaluate WSU students' level of knowledge of the health field 20 multiple choice questions will be included in the survey. Each question will increase in difficulty and five questions will be taken from information pre-health students' are expected to understand during sophomore, junior, senior and post-graduation.

Freshman year has been omitted because during this time information presented to pre-health students is similar to that presented to non-pre-health students. The primary distinctions between pre-health and non-pre-health students involve information that is presented to students later their undergraduate career.

Questions will be constructed on information obtained during pre-health workshops, courses, seminars, medical school open houses, conversations with pre-health advisors and my personal experiences as a pre-health student. Difficulty will be increased by gradually asking questions are specific, ethically based or were obtained directly from medical school professionals.

Goal 3. Understand students' viewpoints regarding physician's white coats

This goal will be achieved by utilizing a two option system of unreliable and reliable to understand participant's views on doctors white coats. Participants must provide an answer for each question based on this system.

Questions will consist of a picture of a male or female physician in a white coat and a picture of a physician in casual attire. Information regarding each physician's specific qualifications and competency of the healthcare field will be displayed under each picture. This information will consist of where the physician obtained their degree, specific actions that they would take in a given situation, viewpoints regarding their scope of practice, role as a specific healthcare specialist and other general competencies that apply to all physicians. Participants will be asked to answer 20 questions with varying amounts and types of information describing each physician. Each question will either contain a single piece of information that physicians should or should not abide by depending on their specific field of practice. Information from the American Medical Association will be used to help formulate these questions.

Both pre-health and non-pre-health students will be exposed to the same set of questions in order to make direct comparisons during data analysis. Answers to all 20 questions will be "reliable" for the physician that is shown without a white coat on.

No ethical questions will be included. Answering to ethical questions tend to vary amongst physicians and healthcare facilities. There are also no decisive answers to ethical questions amongst the healthcare community. This may lead to personal experiences of participants manipulating the results of this survey by including a variety of variables that are not meant to be tested.

Results

After conducting a survey that successfully tests the hypothesis, an analysis will be conducted in order to evaluate the survey's findings in relation to the hypothesis. The analysis of the data will be explained in relation to the three goals previously explained.

Goal 1. Distinguish between WSU pre-health and non-pre-health scholars

Each student's responses to this set of questions will be recorded as "Participant 1" and so on. Based on individual students' responses they will be identified as pre-health or non-pre-health scholars.

If a student does not identify as a pre-health student but their responses lead to the plausibility that they may know a similar amount of knowledge as WSU pre-health students, then they will be noted. The amount of healthcare knowledge that each of these particular participants show will then be examined and a decision will be made as to whether or not they belong in the "pre-health" group. This decision will be made after all of the data has been compiled for all participants and an average level of healthcare knowledge among WSU pre-health students has already been established. If each particular student is within 10% of

the average competency value of students who identified as pre-health students then they will be included in the “pre-health” category for analysis.

Goal 2. Identify WSU students’ level of knowledge of the health field

Student responses to each question will be compared with the answer key to the set of questions. Each student’s overall score, the amount of questions were correctly answered, will dictate their knowledge of the health field for the remainder of the analysis.

This data will be utilized to find average levels of the health field knowledge known by both pre-health and non-pre-health students. These average values will be compared and commented on as to the possible reasoning behind the particular findings.

Goal 3. Understand students’ viewpoints regarding physician’s white coats

Since all answers will be “reliable” for the physician shown in casual attire, an answer key does not have to be created. Instead the total amount of “reliable” answers for physicians in white coats will be recorded for each participant. The average amount of white coat answers for both pre-health and non-pre-health students will be calculated. This value will be compared and an attempt to explain this data will be explained. A statement if the hypothesis was supported or disproved will also be included.

Conclusion

The key aspects of this experiment include the survey that successfully tests the hypothesis, data analysis, data interpretation and how the data related to the original hypothesis. In conducting these aspects carefully and effectively a further understanding of how our perceptions of white coats changes, or does not changes, depending on how much knowledge we know about the health field. In doing so a deeper understanding of how white coats impact the patient-doctor relationship will be acquired, and the literature on this subject will become more complete. I propose that this research be conducted with WSU students, and if time permits that it also be conducted with healthcare professionals around the Pullman area.

I am a senior chemistry and pre-medicine major. I am interested in conducting this research because after learning about the healthcare field through job shadowing, volunteering opportunities, courses at WSU and medical school professional staff members I believe I have a good understanding of many responsibilities that physicians and supporting staff members are expected to fulfill. I learned this information in order to make an educated decision to apply to medical school in the near future.

Team members interested in this research project must follow the guidelines seen below:

1. An open and creative mind.
2. An interest in the healthcare field (although this is not a requirement).
3. A willingness to work collaboratively to create a quality survey quickly so that many students will have the opportunity to fill out the survey. This will also allow for the experimenters enough time to analyze the data.
4. Be reliable.

References

- Doreen, M. (1998). Physicians' attire as perceived by young children and their parents: The myth of the white coat syndrome. *Pediatric Emergency Care*, 14(3), PDF Only.
- Douse, J., et. al. (2004). Should doctors wear white coats?. *Post graduate Medical Journal*, 28(80), 284-286.
- Farrja, R. (1990). *Why do hospital doctors wear white coats?*. (Vol. 80, pp. 284-286). St Mar'ys Hospital Medical School, London: Journal of the Royal Society of Medicine.
- Jones, WHS.(1923). *Hippocrates*. Cambridge, Mass: Harvard University Press, Volume 2. 311-312.
- Kurihara, H. et. al (2014). *Importance of physicians' attire: factors influencing the impression it makes on patients, a cross-sectional study*. (13 ed., Vol. 1, p. 2). Japan: Asia Pac Fam Med.
- McKinstry, B. (1991). Putting on the style: what patients think of the way their doctor dresses. *The British Journal of General Practice*, 41(348), 270-275.
- Wear, D. (1998). On white coats and professional development: The formal and the hidden curricula. *Annals of Internal Medicine*, 129(9), 734-737.