

Original

Impact of the Student Doctor Ceremony and Receiving a White Coat Before Clinical Clerkship Among Medical Students

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SUMMARY

The first white coat ceremony took place at a Japanese medical school in 2001 and was designed to reaffirm the responsibilities of medical students becoming student doctors (SDs) prior to their clinical clerkships. Dokkyo Medical University has been holding an SD ceremony, rather than a white coat ceremony, since March of 2014. White coats adorned with the school emblem and students' names were distributed to students after the SD ceremony for the first time in 2018. Using an anonymous questionnaire, this study examined changes in the students' moods before and after the SD ceremony as well as their impressions of the white coat.

Of 115 responses, 106 with valid data were analyzed. The mean age was 23.44 years. The results indicated that students felt more cheerful, nervous, motivated, hopeful, steadfast, active, and restless after the ceremony than before, with 79.2% of the students reporting a favorable opinion of the white coat adorned with the school's emblem. Additionally, the top three meanings associated with the white coat were cleanliness, uniform, and propriety.

This study revealed the impact of the SD ceremony and the meanings of the white coat among medical students. Both the SD ceremony and white coat ceremony are worthy of future examination.

Keywords : student doctor, white coat ceremony, medical student

INTRODUCTION

The white coat ceremony was first held at Columbia University in 1993 and became a rite of passage in becoming a health professional¹⁻³⁾. While this ceremony is held at the beginning of the medical school in the U.S., it usually takes place in the fourth or fifth

year of medical school prior to the start of clinical clerkship (CC) in Japan. This is due to differences between the two medical education systems : medical school in Japan is a six-year program in which fourth-year medical students are required to pass the Computer Based Test (CBT) and the Objective Structured Clinical Examination (OSCE) to proceed to their fifth year. These two tests were introduced in 2005 to evaluate knowledge, skills, and attitude prior to clinical clerkship. After passing these tests, students become student doctors (SDs), and SD badges are given to the students by the Association of Japanese Medical Colleges (AJMC)^{4,5)}.

Since SDs are qualified to perform certain medical

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Figure 1 An SD badge and the 2018 version of the white coat



Figure 2 Students holding SD certificates after the SD ceremony (February 2nd, 2018)

procedures under the supervision of medical advisors during their clinical clerkship prior to obtaining their medical licenses, this period of their professional development holds significant meaning for Japanese medical students. For this reason, the SD ceremony in Japan is often combined with a white coat ceremony because it is regarded as the best time for students to reflect on becoming part of the medical profession^{5,6}.

The first white coat ceremony in Japan was held at Kurume University in 2001⁷. Since then, at least 40 medical universities have introduced a white coat ceremony as a part of their SD ceremony^{8,9}. Schools of pharmacy and dentistry have also started holding white coat ceremonies prior to clinical training at hospitals. While some studies have reported positive impacts from white coat ceremonies, others have found no significant humanistic influence on student doctors^{7,10}.

Although not a part of the ceremony, the first white coats adorned with the students' names and the school's emblem were given to all fifth-year students after the SD Ceremony at Dokkyo Medical University on February 2nd, 2018, in response to a few enthusiastic students who asked for a white coat ceremony (Figures 1, 2). This study conducted a survey to investigate changes in the mood of students before and after the SD ceremony and their impressions of the white coat.

METHODS

The questionnaire was made based on the Profile of Mood States and data collected from an unofficial sur-

vey of several medical students^{7,11,12}. It was distributed to fifth-year students (N=128) during CC orientation on the day after the SD ceremony. It included questions on their feelings toward CC before and after the ceremony, and their thoughts and views about the white coat they were given after the ceremony. Students answered the questionnaire anonymously, rating each item between 0 (not at all) and 4 (extremely).

Data were analyzed using IBM SPSS version 25. The paired Wilcoxon signed-rank test was used to compare the moods of students before and after the ceremony.

The study was approved by the Human Ethics Review Committee of Dokkyo Medical University (Daigaku 29012).

RESULTS

Of the 115 responses (response rate = 89.8%), we analyzed 106 responses with valid data. The mean age was 23.44 years old, and 69.8% (N=74) were male.

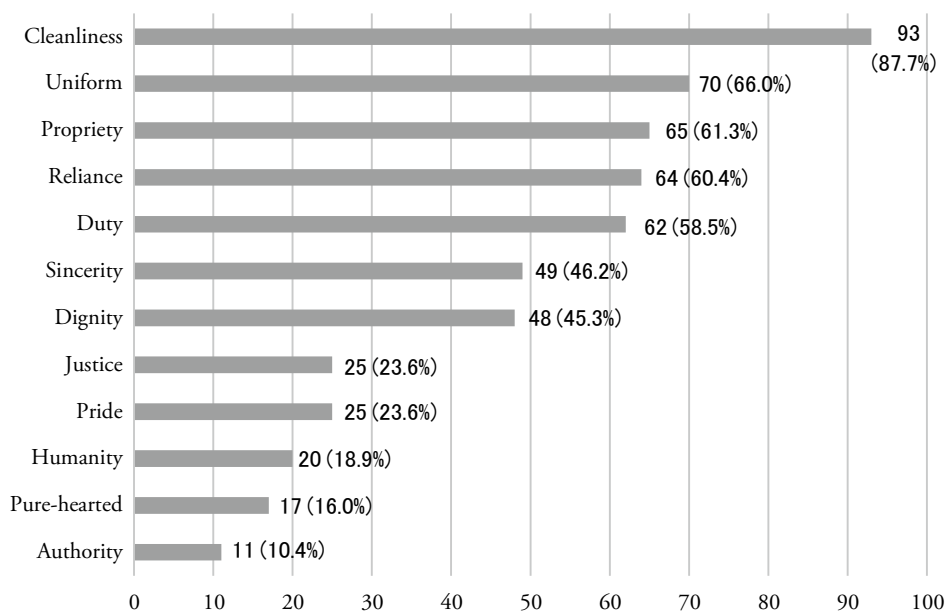
Table 1 presents the moods of students before and after the ceremony. It was found that the students felt more cheerful, nervous, motivated, hopeful, steadfast, active, and restless after the ceremony than before, while feelings of annoyance and worry did not change.

In response to the question about the white coat, 84 students (79.2%) answered that wearing a white coat adorned with the school's emblem would have a good influence on their attitude toward CC. In addition, 88 students (83.0%) replied that wearing a white coat

Table 1 Mean moods before and after SD ceremony (N = 106)

Variables	Pre	Post	Z	p
Cheerful	2.67	2.85	3.307	0.001
Nervous	3.15	3.34	2.554	0.011
Motivated	2.93	3.04	1.990	0.047
Annoyed	1.55	1.56	0.065	N.S.
Anxious	2.85	2.99	1.935	0.053
Hopeful	2.82	2.99	2.612	0.009
Restless	1.85	2.13	3.433	0.001
Steadfast	2.91	3.21	3.953	0.000
Active	2.74	2.95	3.998	0.000
Worried	2.90	2.93	0.524	N.S.

N.S. : not significant

**Figure 3** Meanings of wearing a white coat (multiple answers)

affects doctor-patient relationships.

The last question asked about various meanings associated with wearing a white coat (Figure 3), with the most frequent answer being cleanliness (n = 93, 87.7%), followed by uniform (n = 70, 66.0%), propriety (n = 65, 61.3%), reliance (n = 64, 60.4%), and duty (n = 62, 58.5%), while the least frequent response was authority (n = 11, 10.4%).

DISCUSSION

In this study, it was found that prior to CC, students had positive feelings toward the SD ceremony and receiving their white coats. Unfortunately, there have been few studies on the white coat ceremony in

Japan. According to a report from Kurume University, students indicated greater awareness of their mission and responsibility, an increased desire to study and to lead a moral life, as well as a stronger sense of reverence, professionalism, tenderness for patients, school spirit, and attachment to their white coat after their white coat ceremony⁷⁾. Another study found that the responses to the white coat ceremony were positive overall, but there were some concerns⁹⁾.

We found that the white coat holds many different meanings for students. Students indicated that white coats make a big difference in the doctor-patient relationship. Previous studies have reported that patients prefer doctors who wear a white coat and professional

attire, and have more trust and confidence in physicians wearing a white coat than those who are not^{3,13}. Next, white coats might be related with nosocomial contamination^{14,15}. In our study, 87% of students said that wearing a white coat indicated cleanliness and therefore keeping their white coat clean is very important. However, doctors don't wear white coats all the time due to reports of white-coat hypertension¹⁶. Moreover, pediatricians and home-visit doctors prefer not to wear them. Therefore, a white coat should be worn with great caution and a sense of professionalism.

There are questions concerning how the SD and white coat ceremonies should be conducted at Dokkyo Medical University in future. Various types of ceremonies are held across medical schools in Japan. At some schools, a white coat and an SD badge from AJMC are presented to students by the president, dean, and several faculty members^{7,9,10,17}. At other schools, students already wearing white coats are presented with SD badges^{18,19}. At still other schools, the white coat ceremony is emphasized more than the SD ceremony, as is the case for American medical schools^{1,20}. Because official SD badges have been distributed by AJMC since 2013, it has been suggested that, in the future, SD badges and white coats be given to students instead of SD certificates at Dokkyo's SD ceremony.

This study has some limitations. The changes in mood among students before and after the ceremony were examined without a control group and thus the results might not be generalizable. Moreover, the questionnaire was given to the students following the ceremony and asked them to recall their mood before the ceremony as well as after; therefore, their recall bias might have had an influence on the outcomes.

In this study, we showed that a ceremony and receiving one's white coat had a positive impact on students' feelings toward their chosen profession. What physicians are perceived to be by society will change over time and it is important to be aware of this. We wish for all our medical students to become excellent doctors in the near future.

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SD 証・白衣とプロフェッショナリズムに関するアンケート

2018年2月3日(土)

この度はスチューデント・ドクター (SD) 認証、おめでとうございます!

今年度、初めて獨協医科大学はBSLを開始する皆さんへ、校章と名前入りの白衣を贈ることになりました。この白衣が、皆さんのプロフェッショナリズムにどのような影響があるか、また今後のSD認証式、白衣授与のかたちについてご意見をお聞きたい、アンケートへの回答をお願い致します。

なお、アンケート結果は集計後、大学内外の報告に用いられることがあります。アンケートにご協力いただける方は、以下の項目にご回答ください。

1. 年齢 : ()
2. 性別 : ()
3. **昨日の午後 (SD 認証式) 前**の、BSL に対するあなたの気持ちについて、該当する数字に○をつけてください。
- | | 全くなかった | たまにあった | 時々あった | よくあった | 非常に多くあった |
|---------|--------|--------|-------|-------|----------|
| 楽しみだ | 0 | 1 | 2 | 3 | 4 |
| 緊張する | 0 | 1 | 2 | 3 | 4 |
| 意欲がある | 0 | 1 | 2 | 3 | 4 |
| 億劫である | 0 | 1 | 2 | 3 | 4 |
| 不安である | 0 | 1 | 2 | 3 | 4 |
| 期待している | 0 | 1 | 2 | 3 | 4 |
| 落ち着かない | 0 | 1 | 2 | 3 | 4 |
| 気が引き締まる | 0 | 1 | 2 | 3 | 4 |
| 積極的な気分だ | 0 | 1 | 2 | 3 | 4 |
| あれこれ心配だ | 0 | 1 | 2 | 3 | 4 |
4. **SD 認証式後**、BSL に対する**今のあなたの気持ち**に該当する数字に○をつけてください。
- | | 全くなかった | たまにあった | 時々あった | よくあった | 非常に多くあった |
|---------|--------|--------|-------|-------|----------|
| 楽しみだ | 0 | 1 | 2 | 3 | 4 |
| 緊張する | 0 | 1 | 2 | 3 | 4 |
| 意欲がある | 0 | 1 | 2 | 3 | 4 |
| 億劫である | 0 | 1 | 2 | 3 | 4 |
| 不安である | 0 | 1 | 2 | 3 | 4 |
| 期待している | 0 | 1 | 2 | 3 | 4 |
| 落ち着かない | 0 | 1 | 2 | 3 | 4 |
| 気が引き締まる | 0 | 1 | 2 | 3 | 4 |
| 積極的な気分だ | 0 | 1 | 2 | 3 | 4 |
| あれこれ心配だ | 0 | 1 | 2 | 3 | 4 |

5. 『白衣授与式』を知っていますか。 はい いいえ
6. 白衣授与式とは、臨床実習前の医学部生(または医療従事者をを目指す学生)に白衣を授与し医師を志す者としての自覚を促す式典で、近年では多くの大学で実施されています。今後、本学でのSD認証式に、白衣授与を含めることについてどう思いますか。
- 賛成である 反対である どちらでもよい
7. 大学からスチューデントドクターに対して校章入りの白衣を授与することはいかがですか。
- 賛成である 反対である どちらでもよい
8. 校章入りの白衣を受け取ってどう思いましたか。ご自由にご記載ください。
-
9. 今後も校章入りの白衣授与が行われる場合、どのような形で受け取るのがよいと思いますか。場所、方法について各1つに○をつけてください。
- ① 場所 : () オリエンテーション ② 方法 : () 配布のみ
() SD 認証式の一部 () 自分で着る
() SD 認証式の後 () 先生に着せてもらう
10. 校章入りの白衣を着ることで、BSLに真摯に取り組む気持ちに良い影響はありましたか。
- はい いいえ
11. 白衣を着ることで、医師と患者の関係は変わると思えますか。
- はい いいえ
12. 白衣を着る意味は何だと思えますか。以下のうち該当すると思うものすべてに○をつけてください。
- () 制服 () 清潔 () 慈悲
() 信頼 () 職責 () 礼儀
() 正義 () 権威 () 純粋
() 品格 () 誇り () 誠意
() その他 : ご記入ください。 _____



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